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**PROMOTION OF
LAMB**

**RESULTS OF A
CAMPAIGN IN
CLEVELAND, OHIO**

**UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
MARKETING RESEARCH DIVISION
WASHINGTON , D.C.**

**MARKETING
RESEARCH
REPORT
NO. 292**

PREFACE

This report evaluates the consumption of lamb in relation to initial promotional efforts by the American Sheep Producers Council in Cleveland, Ohio. The study is part of a broad program to provide information helpful in expanding markets for farm products in general. The research was conducted by the Market Development Branch of the Marketing Research Division, Agricultural Marketing Service.

Measuring the effectiveness of advertising is a new area of research for the United States Department of Agriculture. The analytical techniques employed in this field are still experimental. The techniques of this study represent one of several possible approaches to the problem. It is hoped that in additional research to be undertaken on lamb or other agricultural commodities, methodology for measuring advertising effectiveness can be further explored and refined. In the present study, the techniques employed permit an evaluation of the short-run effectiveness of the promotional campaign with a known degree of reliability. Measurement of the long-run effects of the campaign was not a part of this study but would be desirable in subsequent research.

Part I, The Consumer Surveys, was conducted under the direction of Trienah Meyers. Daniel B. Levine was the project director.

Part II, Analysis of Wholesale and Retail Data, was under the direction of George H. Goldsborough. Hugh M. Smith was the project director.

The study was conducted under the general direction of Robert M. Walsh, Chief of the Market Development Branch.

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CONTENTS

	<u>Page</u>
Summary-----	1
Introduction-----	3
Part I.--The Consumer Surveys	
Procedures-----	4
Scope of the survey-----	4
Survey results-----	5
The promotional campaign-----	5
Results of the campaign-----	6
Relation between use of lamb and awareness of promotional program---	8
Part II.--Analysis of Wholesale and Retail Data	
Objectives-----	9
Sales of lamb at wholesale-----	9
Estimating sales-----	9
Results of promotional program-----	15
Sales of lamb at retail-----	18
Procedure-----	18
Results of campaign-----	18
Merchandising practices of retailers-----	20
Use of point-of-sale material and in-store advertising-----	20
Display space-----	21
Kinds of cuts displayed-----	24
Pricing practices-----	26
Appendix	
Part I, technical notes, consumer surveys-----	30
Sampling error-----	30
Sample weighting-----	31
Sample comparisons-----	31
Part II, technical notes, market data-----	31
Retail store sample-----	31
Seasonal factor-----	31
Tables-----	33

PROMOTION OF LAMB--RESULTS OF A CAMPAIGN IN CLEVELAND, OHIO

By J. Scott Hunter, Wendell E. Clement, and Nick Havas
Market Development Branch
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SUMMARY

In an intensified program of lamb promotion by the American Sheep Producers Council during July and August 1956 in Cleveland, Ohio, sales of lamb at wholesale increased 14 percent above the estimate of normally expected levels. During July, the first month of promotion, actual sales of lamb at wholesale were not significantly different from those expected without promotion. It was during August, the second month of promotion, that actual sales showed a significant increase. According to an estimate based upon the existing price of lamb and other meats, the level of consumer income, season of year, and the merchandising activities of retailers, 744,000 pounds normally would have been sold during this month without promotion. Actual sales were 851,000 pounds, a gain of more than 100,000 pounds or 14 percent. A difference of this magnitude suggested that after the first month of promotion, the Council was successful in stimulating the sales of and consumer expenditures for lamb in Cleveland.

During September, the first month after the intensive campaign had ceased, sales were below the normally expected levels by about 100,000 pounds, and during October, actual sales were about the same as those expected without promotion.

To summarize, it appears that brief intensive campaigns will move increased quantities of lamb and might be especially useful in marketing unusually heavy seasonal supplies. This study was concerned with the short-run effects of promotion. Additional research is needed to determine whether sales will hold part or all of the initial increase if promotional activities are sustained.

The estimates of normally expected sales discussed in the preceding paragraphs were derived by using multiple regression techniques. A regression analysis covering 40 months before the advertising campaign launched by the American Sheep Producers Council indicated that 86 percent of the variation in monthly sales of lamb by wholesale meat packers in Cleveland could be explained by retail price of lamb, retail prices of other red meats and poultry, level of consumer income, season of year, and merchandising activities of retailers as reflected by their newspaper advertising. When these variables were used to estimate sales for each of 42 months before promotion, estimated sales differed from actual sales by 4.4 percent. This result along with other considerations suggested that the level of sales to be normally expected during a given month could be determined with some confidence. In addition, this technique of estimating permits determining the approximate degree of reliability of each estimate.

In analyzing the historical data for purposes of developing the estimating procedure, it was necessary to use wholesale sales to indicate the monthly consumption of lamb in Cleveland. Sales of lamb by Cleveland wholesale meat packers were obtained for the 2 promotion months and for 2 months immediately following the intensive promotion, as well as for the 42 prior months. The effectiveness of the promotional campaign of the Council was evaluated by comparing actual sales during July and August with estimates of the sales that would have resulted without the advertising stimulant.

In addition to analyzing wholesale data, retail store audits were conducted for a 2-week period before, during, and after the campaign to evaluate the effectiveness of the campaign in chain and independent stores and to learn the extent of retailer participation in the overall campaign conducted by the Council.

A comparison of the retail sales and price data revealed that during the promotional period the demand for lamb increased substantially more in corporate chains than in independents. Chain stores during promotion sold about 8 percent more lamb than in the 2-week pre-promotional audit period at a 3-percent higher price, while independent stores sold about 1 percent less at a 3-percent higher price. Consumer expenditures (sales times price) increased 11 percent during promotion in chains compared with a 1-percent increase in independents. Rather significantly, the degree of success observed in the 2 types of outlets appeared to be directly related to the lamb merchandising in the stores. Chains merchandised lamb more aggressively than independents during the promotional period. This was indicated by: (1) An increase in the variety of cuts offered consumers; (2) a larger increase in the proportion of meat display space given the product; and (3) more extensive use of in-store advertising of lamb.

Additional data relating to the campaign were obtained from interviews in October 1956, with a representative sample of homemakers in the Cleveland market. The findings from that survey indicated that the promotional program caught the attention of about one-fourth of the homemakers in the area.

An earlier household survey, conducted in June 1955, showed that 49 percent of the homemakers in the Cleveland area were using lamb in their homes. In comparison, 56 percent of the homemakers were using lamb at the time of the second survey. Almost all of this increase in the use of lamb occurred among respondents who were aware of the promotional program.

Another aspect of this study was the general merchandising practices of retailers with respect to lamb. Generally, chain stores, which were mostly large-volume outlets, displayed a wider variety of lamb cuts than independents. Chains displayed 5 to 6 kinds of cuts compared with 1 to 2 kinds of cuts displayed in independents. These differences are probably the result of differences in store size between chains and independents. Ninety-six percent of the chain stores in the sample had a total annual sales volume in excess of \$100,000 whereas the annual sales volume of three-fourths of the independent stores was below \$100,000. In both types of outlets, the cut most commonly

displayed was leg of lamb. In most instances where retailers had a choice of cutting a part of the carcass into roasts or chops, chops were usually the cut chosen. From the standpoint of display space given each type of meat, each of the other red meats and poultry was allocated a larger proportion of the total meat display space than lamb. Fish was the only item which ranked below lamb.

INTRODUCTION

The American Sheep Producers Council, a promotional organization of sheep producers, sponsored an intensive promotional campaign for lamb in Cleveland, Ohio, during the summer of 1956. This was one of several promotional programs the Council conducted in various cities throughout the United States. The intensive promotional activities in Cleveland began in July and reached a peak in August, with some diminishing newspaper advertising continuing through the remainder of the year. The media utilized in the advertising were newspapers and radio.

Dealer-service representatives, who were personnel of the Council, encouraged wholesale meat packers, chain stores, and some of the larger independent stores to participate in the promotion. Retailers were furnished point-of-purchase material (pictures, posters, and other advertising) and were asked to feature lamb in their stores and in their advertising in newspapers, radio, and television. Restaurant associations were also informed of the promotion and encouraged to feature lamb on their menus.

The Consumer Service Department of the Council conducted three cooking schools in a local department store to acquaint consumers with lamb. A carcass was divided to show how different cuts are derived, and several different cuts were cooked to illustrate methods of preparation. Three similar schools were conducted in areas surrounding Cleveland and supplied by Cleveland wholesalers.

The extent of commercial advertising of lamb by the Council was measured by the number of lines in newspapers and by the number of 1-minute announcements by radio (table 1).

Table 1.--Volume of advertising of lamb by the American Sheep Producers Council during specified periods in Cleveland, Ohio, 1956

Media	Extent of advertising	Period
Newspaper:		
Newspaper A-----	7,249 lines	June 27-August 29
Newspaper B-----	7,249 lines	June 28-August 30
Radio:		
Station A-----	80 1-minute announcements	July 2-August 24
Station B-----	88 1-minute announcements	July 2-August 25

The consumer survey phase of this report is a supplement to an earlier report published by the Department of Agriculture based on a survey conducted in 1955 which described patterns of lamb use and consumer attitudes toward lamb in Cleveland, Ohio. 1/ The original consumer report was based on a household survey conducted in order to obtain basic information needed by the lamb industry in developing its advertising and sales promotional programs.

PART I.--THE CONSUMER SURVEYS

PROCEDURES

The data on which this phase of the report is based were obtained by interviews with representative samples of homemakers drawn by area probability techniques, in the pre-promotion and post-promotion periods. 2/ The pre-promotion interviewing took place during the last 3 weeks of June 1955, the post-promotion interviewing during the first 3 weeks of October 1956.

In each household, the person considered eligible for interview was the person chiefly responsible for planning and preparing meals. Usually this person was the housewife, although occasionally men were interviewed. The findings presented are based on interviews with 631 respondents.

SCOPE OF THE SURVEY

The October 1956 consumer survey was designed to provide the following information:

1. An appraisal of the effectiveness of the promotional campaign in attracting public attention to lamb.
2. A measure of the overall changes in the incidence and frequency of use of lamb between the time of the first survey and the time of the second.
3. An estimate of the effect of the promotion in stimulating the use of lamb among those who were aware of the campaign.

In addition, some information obtained and reported in the earlier study was again collected to see what, if any, changes had taken place. Specifically this information included:

1. The attitudes toward lamb of homemakers who do not use it.

1/ Levine, Daniel B., and Hunter, J. Scott. Homemakers' Preferences for Selected Cuts of Lamb in Cleveland, Ohio. U. S. Dept. Agr., Agr. Mktg. Serv., Mkt. Res. Rpt. 113, 44 pp., 1956.

2/ A description of the sampling procedures and a comparison of the consumer samples is given in the Technical Notes, Appendix.

2. The effect on lamb consumption of such factors as (a) year-round availability, (b) opinions about the food value of lamb relative to other meats, and (c) homemakers' confidence in their ability to prepare lamb well.
3. Patterns of use of lamb.

A comparison of the replies to these questions with the information collected in the earlier study indicated little change. Answers to questions on these topics, however, are presented in tabular form in the Appendix (tables 24-38). The text of this report is restricted to a discussion of the effects of the promotion campaign.

SURVEY RESULTS

The Promotional Campaign

The intensive lamb promotion campaign which preceded the October 1956, survey has been described in the Introduction. The promotional efforts appear to have attracted the attention of about one-fourth of the homemakers in the area. Twenty-five percent of the respondents interviewed said that they had seen newspaper advertisements, heard radio commercials, or noticed unusual lamb displays in the stores where they shopped.

The promotional efforts were somewhat more effective in attracting the attention of homemakers who were already using lamb than of those who were not. In this report, homemakers who had served lamb to their families at least once during the 12 months preceding the survey are referred to as lamb users; those who had not are referred to as nonusers. About 3 lamb users in 10 compared with 2 nonusers in 10 reported that their attention had been attracted to lamb by 1 or more of the promotional methods.

Awareness of the campaign was also related to the frequency with which homemakers served lamb. Respondents who had served lamb 1 or more times a week in the year preceding the survey are referred to in this report as frequent users; those who had served it between once a week and once a month are classified as moderate users; and those who had served it less often than once a month are considered infrequent users. About 4 in 10 of the frequent users compared with about 3 in 10 of the moderate and infrequent users had had their attention attracted to lamb during the course of the campaign.

Measuring the relative effect of the various promotional methods is difficult because of the reliance that must be placed on memory and because of the operation of unconscious influences. However, newspaper advertising and radio commercials appear to have caught the attention of more homemakers than the special lamb displays in retail stores. Twenty-four percent of the respondents recalled seeing lamb advertisements or hearing radio commercials, whereas only 8 percent recalled noticing unusual retail store displays.

Although the lamb displays attracted the attention of a smaller proportion of respondents than the other promotional methods, their effectiveness differed from the effectiveness of the other methods in one important respect. Among lamb users, the tendency to notice advertisements or commercials was related to the frequency of use; over 4 in 10 of the frequent users compared with 3 in 10 of the moderate and 2 in 10 of the infrequent users recalled these aspects of the promotional campaign. Retail store displays, on the other hand, were about equally effective in catching the attention of homemakers in all frequency-of-use groups, as well as nonusers. Respondents who had noticed these displays described them as larger, more prominent, and more attractive than lamb displays ordinarily are (table 12).

One other consideration also suggests the importance of retail store displays in product promotion programs. In both the June 1955 survey and the October 1956 survey, respondents were asked if they sometimes decided to buy lamb because of displays, advertising, commercials, or suggestions from a clerk or butcher. At both times about 5 homemakers in 10 credited displays with an influence on their shopping decisions compared with 2 or 3 in 10 who said they were influenced by 1 of the other promotional methods (table 13).

Results of other surveys have indicated that awareness of a product promotion is related to certain background characteristics of consumers. People in higher income groups, younger people, and those with more years of formal education are often more likely than people in other groups to be aware of a product promotion. In Cleveland, however, no such clear relationships appeared; between 2 and 3 in 10 respondents in each income, age, and educational group were reached by 1 or more of the methods used in the promotion of lamb (table 14).

Results of the Campaign

The objectives of the promotional campaign were: (1) To attract new users, (2) to increase the frequency of use among all users, and (3) to create an interest in the less commonly known cuts.

The campaign appears to have had some success in accomplishing the first of these objectives. At the time of the first survey in June 1955, 49 percent of the respondents said they had served lamb during the preceding year; in the second survey in October 1956, 56 percent of the homemakers said they had used it during a similar time interval (table 15).

While some year-to-year fluctuation in the incidence of lamb use is to be expected, it is unlikely that such fluctuations would be as large as the differences observed between the two surveys.

Replies to the direct question, "How long have you been using lamb?" show that about 2 percent of the respondents had started using lamb during the course of the campaign, that is, within the previous 3 months. This result should not be regarded as a more precise estimate of the effect of the

campaign than the difference between the proportion of lamb users found at the time of the first survey and at the time of the second. It is evident that a homemaker who had used lamb at any time during her life would answer that she had been using lamb longer than 3 months even though some aspect of the campaign may have induced her to make her more recent purchases, thus, according to our definition, becoming a lamb user.

The slight increase in the proportion of lamb users, however, was not accompanied by an increase in the frequency of its use. The proportions of frequent and moderate users, in fact, remained unchanged, while the proportions of infrequent users increased from 15 percent in June 1955 to 21 percent in October 1956.

It should not be assumed that the larger proportion of infrequent users resulted from the fact that new users had not had an opportunity to serve lamb as frequently as homemakers who had been serving it for a longer time. Respondents were asked, "Are you now using more lamb, less lamb, or about the same amount of lamb as you were using a year ago at this time?" Nearly 2 in 10 of all lamb users said they were using less, whereas only 1 in 10 said they were using more. Replies to this question also showed that homemakers who served lamb infrequently or moderately were more likely than the frequent users to say that they were using less lamb (table 16).

Respondents who were using either more or less lamb were asked to give the reasons for the change in their eating habits. The chief reasons given for serving less lamb were its cost, a dislike of some characteristic such as flavor or taste, and a change in the size of the household. Each of these reasons was mentioned by almost 2 homemakers in 10 who were using more or less lamb than they formerly had. The most commonly mentioned reason for using more lamb was a change in diet necessitated by some health condition. This reason was given by nearly 2 in 10 of the homemakers who reported a change in their use of lamb (table 17).

The promotional campaign was perhaps not long or intensive enough to create much interest in the less commonly used cuts. Identical proportions of respondents in both the June 1955 and the October 1956 surveys reported having used each cut in the preceding year. Cuts most widely used were chops, served by about 9 homemakers in 10, and leg of lamb, served by 6 homemakers in 10. Flank remained the least widely used with less than 1 homemaker in 10 having used it. Other cuts were used by 2 to 3 homemakers in 10 in both surveys (table 18).

Frequency of use of the different cuts was also the same at the time of both surveys. Chops remained the most frequently used cut, with a median frequency of use of about 12 times per year. Other cuts had a median frequency of use of 3 to 5 times per year (table 19).

A final point to be made in this section concerns the relationship between use of lamb and homemakers' background characteristics. Just as in the earlier survey, lamb use was found to be related to the income level of

the family, the years of education completed by the homemaker, and the age of the homemaker.

Those in the upper income group, those who had been to college, and those over 45 years of age were more likely than homemakers in other groups to use lamb. The second survey revealed an additional relationship. For the sampled households, lamb was more likely to be served in small- or medium-sized households than in larger households with 5 or more members. Finally, the relationship between race and lamb use which was observed on the first survey had disappeared; white and nonwhite respondents were equally likely to say they used lamb (table 20).

Relation Between Use of Lamb and Awareness of Promotional Program

As noted, the lamb-promotion campaign succeeded in catching the attention of about one-fourth of the homemakers in the Cleveland metropolitan area. While the promotional program may have had some influence of which homemakers were unaware or which they did not recall, it is reasonable to suppose that the increase in lamb use would be most apparent among homemakers who reported that they had been made aware of the campaign through one or more of the media used.

Those homemakers who recalled newspaper advertisements or radio commercials about lamb, or who had noticed unusual lamb displays in retail stores, are referred to in this report as "aware" respondents; those who did not recall any of these aspects of the campaign are referred to as "unaware" respondents.

Almost all of the increase in the incidence of the use of lamb described in the previous section occurred among homemakers who were aware of the promotion. Seven in 10 of the aware respondents compared with 5 in 10 of the unaware respondents had used lamb in the year preceding the survey (table 21). The proportion of lamb users among unaware respondents was about the same as that found in the earlier survey.

Aware respondents were also likely to have been using lamb more frequently than unaware respondents. Among aware respondents, 23 percent had used lamb 52 or more times in the preceding year whereas among unaware respondents only 12 percent had used lamb this often. Among aware respondents, 25 percent had served lamb between once a week and once a month in the preceding year, while 19 percent of the unaware respondents had served lamb this frequently. Twenty-three percent of the aware respondents and 21 percent of the unaware respondents had used lamb less often than once a month (table 21).

The finding that the frequency of use of lamb was related to awareness of the promotional campaign is consistent with the result of another question, "Are you now using more lamb, less lamb, or about the same amount of lamb as you were using a year ago at this time?" Twenty percent of the aware respondents said they were using more, whereas only 8 percent of the unaware

respondents said they were using more. On the other hand, 12 percent of the aware respondents were using less and 21 percent of the unaware respondents were using less (table 22).

No relationship was found between awareness and the use of lamb cuts not previously used. About 6 percent of both the aware and the unaware respondents reported that they were using a cut of lamb which they had not been using a year earlier. Moreover, aware and unaware respondents do not differ with respect to the particular cut which they had started using. One or 2 percent of each group had started using a new cut. The new cuts used were leg, chops, neck, shank, or patties (table 23).

PART II.--ANALYSIS OF WHOLESALE AND RETAIL DATA

OBJECTIVES

The objectives of this phase of the study were:

1. To evaluate the effectiveness of the promotional campaign upon demand for lamb in Cleveland as observed from market trends.
2. To learn the extent to which retailers participated in the overall campaign as evidenced by their merchandising activities during the promotional period.
3. To obtain information relating to the general merchandising practices for lamb at the retail level.

SALES OF LAMB AT WHOLESALE

Estimating Sales

One of the major objectives of this phase of the study was to determine the impact of the promotional program on the sales of lamb. It is evident that the effects of the promotional program could be readily evaluated if it were known what sales would normally have been during the promotional period without the advertising effort. Such information concerning sales is never known but must be estimated. Therefore, part of the analysis in this study was directed at developing a technique whereby reliable estimates could be made of the normally expected volume of sales during a given period. This information makes possible an evaluation of the advertising effectiveness by comparing actual sales during the promotional period with the estimate of the expected volume without such stimuli.

Multiple correlation analyses were used to provide a basis for estimating sales. Monthly sales of lamb in Cleveland by wholesale meat packers were obtained for a period of 42 months prior to the promotional campaign and for a period of 4 months during and after the campaign. Forty of the 42 months were

used as a base period to determine the factors or variables normally influencing lamb sales and to measure sales response to varying levels or magnitudes of these variables during the base period. The 2 months excluded from the analysis were May and June 1956, immediately prior to the initiation of intensive promotion in July. Data covering these 2 months were used as one of several means of determining the reliability of the estimating procedure.

Based upon the relationships established by the correlation or regression analyses, the normally expected volume of sales during a particular period may be estimated by taking into consideration the prevailing magnitude of those factors found to affect sales. Initially, it appeared that lamb sales during a given month might be dependent upon the prevailing prices of lamb, beef, pork, veal, and poultry; the level of consumer income; and the season of year. Therefore, a regression analysis was made to determine the extent to which these variables could be used to predict or estimate lamb sales.

Lamb sales of wholesale meat packers in Cleveland were used to indicate the monthly level of consumption, and this level was the dependent variable in the analysis. The independent variables were: (1) Composite retail price of lamb, (2) composite retail price of other red meats and poultry, (3) consumer income, and (4) season of year.

The retail price of each type of meat in Cleveland was developed from price data published by the Bureau of Labor Statistics. The composite retail prices are estimates, since the Bureau of Labor Statistics reports the prices of selected cuts only for each type of red meat. Therefore, it is likely that some error is involved in the price data used in the analysis. ^{3/} The prices of other red meats and poultry were combined into one variable by weighting the price of each by its corresponding United States per capita consumption. The data on consumer income were also obtained from the Bureau of Labor Statistics and represent for each month the total number of people employed multiplied by the average weekly earnings of production workers per person. The seasonal factors were derived from the residuals after the other variables had been included in the analysis. ^{4/} Data used in deriving the estimating equation were on a monthly basis and covered the period January 1953 through April 1956 (table 2).

The results indicate that the independent variables included in the initial computations explained about 74 percent of the month-to-month variation

^{3/} Assuming the errors are random, the effect would be to understate the true regression coefficients. From a practical standpoint this would not appear to be a serious limitation, since the primary interest is in developing a forecasting procedure rather than ascertaining unbiased estimates of the regression coefficients.

^{4/} The method followed in computing the seasonal factors is outlined in detail in the appendix.

Table 2.--Variables used in regression analyses to determine factors affecting sales of lamb in Cleveland, Ohio

Month and year	Sales of lamb at wholesale	Composite retail price of lamb	Composite retail price of other red meats and poultry	Total consumer income	Newspaper advertising 1/	Seasonal	
						Used in 1st regression	Used in 2nd regression
	1,000 pounds	Cents	Cents	Million dollars	Percent	Percent	Percent
1953							
January -----	762.2	64.0	69.2	28.4	5.28	97.3	98.0
February -----	890.7	61.8	63.1	28.5	3.24	116.7	116.8
March -----	662.1	60.7	62.7	28.8	2.49	88.5	91.8
April -----	710.2	65.5	63.4	28.5	1.69	90.0	94.1
May -----	752.5	73.4	63.5	28.5	1.45	118.2	116.4
June -----	547.9	77.3	64.3	29.0	0.28	87.2	89.8
July -----	584.6	79.8	65.1	28.8	.43	96.2	96.6
August -----	680.6	72.8	67.8	28.5	2.56	112.9	102.9
September -----	791.6	68.7	67.4	28.7	15.20	99.9	91.6
October -----	892.2	64.4	65.9	28.4	8.23	103.6	103.6
November -----	736.5	63.3	63.4	27.5	.34	98.6	103.0
December -----	603.0	64.9	65.0	27.8	2.57	92.9	93.4
1954							
January -----	749.8	66.1	66.3	27.0	2.69	97.3	98.0
February -----	888.2	63.5	65.3	26.0	10.53	116.7	116.8
March -----	654.5	65.9	64.5	25.0	2.87	88.5	91.8
April -----	604.1	71.3	65.5	24.8	.83	90.0	94.1
May -----	764.6	73.8	65.8	24.4	.31	118.2	116.4
June -----	577.1	75.3	65.7	24.5	1.60	87.2	89.8
July -----	598.7	74.8	64.9	23.9	2.73	96.2	96.6
August -----	917.3	69.3	63.3	23.6	26.61	112.9	102.9
September -----	600.1	66.8	64.1	23.6	8.09	99.9	91.6
October -----	711.5	65.2	63.4	24.6	3.50	103.6	103.6
November -----	744.8	65.0	63.4	25.3	2.39	98.6	103.0
December -----	655.9	69.1	63.1	25.9	2.85	92.9	93.4
1955							
January -----	724.2	66.3	63.5	26.1	3.24	97.3	98.0
February -----	794.4	66.7	63.7	26.3	.76	116.7	116.8
March -----	677.5	67.3	63.8	27.0	1.43	88.5	91.8
April -----	638.2	69.0	62.9	26.9	.95	90.0	94.1
May -----	870.5	68.4	62.9	28.1	13.05	118.2	116.4
June -----	554.7	72.0	63.6	27.3	3.50	87.2	89.8
July -----	620.3	74.3	62.6	28.3	5.98	96.2	96.6
August -----	675.5	74.5	62.3	28.3	1.74	112.9	102.9
September -----	733.4	71.9	63.2	29.1	8.41	99.9	91.6
October -----	728.1	65.8	61.9	30.2	2.30	103.6	103.6
November -----	727.3	64.9	58.3	30.6	1.43	98.6	103.0
December -----	746.3	67.1	57.1	30.9	5.08	92.9	93.4
1956							
January -----	707.4	62.7	56.7	30.4	5.40	97.3	98.0
February -----	956.7	62.9	56.2	30.1	3.67	116.7	116.8
March -----	645.6	63.1	54.5	29.7	.85	88.5	91.8
April -----	607.7	64.7	56.1	29.6	1.25	90.0	94.1
May -----	737.7	72.4	56.7	29.0	.53	118.2	116.4
June -----	599.3	79.0	58.0	29.3	2.10	87.2	89.8
July -----	552.8	76.4	58.9	27.5	3.07	96.2	96.6
August -----	850.7	72.2	60.4	29.6	7.29	112.9	102.9
September -----	526.2	71.5	62.9	30.4	2.12	99.9	91.6
October -----	680.4	66.1	61.9	31.2	1.96	103.6	103.6

1/ Represents the ratio of lamb advertising to all meats.

in lamb sales. 5/ The extent to which these variables predicted the sales of lamb in a given month is shown in figure 1 and table 3. The line in the

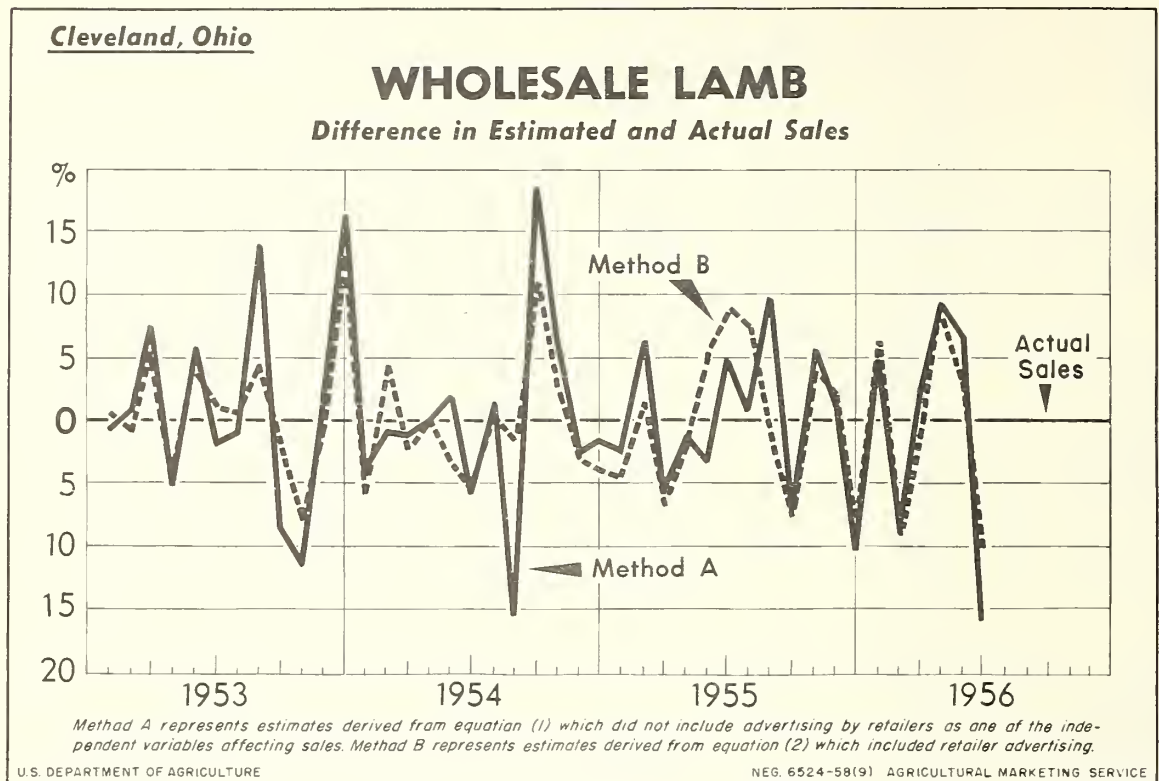


Figure 1

5/ The regression equation obtained was as follows:

$$(1) X_1' = 383.7 - 10.1X_2 + 2.9X_3 + 4.4X_4 + 7.2X_5$$

(-4.9) (0.87)* (0.88)* (8.3)

Mean values

R	= 0.862. Standard error of estimate = 55.9	
X ₁ '	= Estimated monthly sales of lamb by wholesale meat packers in Cleveland.....	712.2 (Thous. lbs.)
X ₂	= Composite retail price of lamb.....	68.1 (Cents)
X ₃	= Composite retail price of other meats and poultry...	63.1 (Cents)
X ₄	= Total consumer earnings in Cleveland.....	27.4 (Mil. dols.)
X ₅	= Seasonal.....	100.0 (Percent)

The numbers in parentheses are "t" ratios and R is the coefficient of multiple correlation.

*Not statistically significant.

Table 3.--Actual and estimated wholesale lamb sales and percentage difference, Cleveland, Ohio, by months,
1953-56

Month	1953					1954				
	Actual sales	Method A <u>1/</u>		Method B <u>2/</u>		Actual sales	Method A <u>1/</u>		Method B <u>2/</u>	
		Estimated sales	Difference	Estimated sales	Difference		Estimated sales	Difference	Estimated sales	Difference
January ---	1,000 pounds	1,000 pounds	Percent	1,000 pounds	Percent	1,000 pounds	1,000 pounds	Percent	1,000 pounds	Percent
February ---	762.2	756.7	-0.7	766.5	0.6	749.8	720.7	-3.9	705.2	-5.9
March -----	890.7	900.4	1.1	882.7	- .9	888.2	878.5	-1.1	924.6	4.1
April -----	662.1	710.0	7.2	699.1	5.6	654.5	645.7	-1.3	638.8	-2.4
May -----	710.2	672.7	-5.3	674.3	-5.1	604.1	603.7	- .1	600.0	- .7
June -----	752.5	794.5	5.6	781.7	3.9	764.6	779.1	1.9	740.5	-3.2
July -----	547.9	537.7	-1.9	552.6	.9	577.1	542.3	-6.0	544.9	-5.6
August -----	584.6	578.2	-1.1	587.7	.5	598.7	606.8	1.4	601.6	.5
September ---	680.6	775.2	13.9	711.0	4.5	917.3	776.1	-15.4	903.0	-1.6
October ---	791.6	723.6	-8.6	774.8	-2.1	600.1	710.8	18.4	666.3	11.0
November ---	892.2	788.0	-11.7	821.6	-7.9	711.5	756.0	6.3	730.1	2.6
December ---	736.5	752.1	2.1	734.7	- .2	744.8	725.2	-2.6	722.8	-3.0
	603.0	701.1	16.3	681.0	12.9	655.9	644.6	-1.7	630.8	-3.8
1955										
January ---	724.2	706.5	-2.4	691.6	-4.5	707.4	742.2	4.9	751.6	6.2
February ---	794.4	842.7	6.1	807.5	1.6	956.7	876.1	-8.4	869.2	-9.1
March -----	677.5	638.3	-5.8	630.6	-6.9	645.6	665.7	2.2	646.5	.1
April -----	638.2	628.7	-1.5	626.9	-1.8	607.7	664.4	9.4	660.5	8.7
May -----	870.5	841.8	-3.3	920.4	5.7	737.7	3/787.1	6.7	3/761.4	3.2
June -----	554.7	582.0	4.9	603.3	8.8	599.3	3/503.4	-16.0	3/538.6	-10.1
July -----	620.3	624.5	.7	665.9	7.4					
August -----	675.5	741.1	9.7	670.5	- .7					
September ---	733.4	680.6	-7.2	677.6	-7.6					
October ---	728.1	770.0	5.8	758.0	4.1					
November ---	727.3	734.7	1.0	743.0	2.2					
December ---	746.3	669.4	-10.3	688.8	-7.7					

1/ In method A sales were estimated by using equation (1) which did not include advertising by retailers as one of the variables affecting sales.

2/ In method B sales were estimated by using equation (2) which included advertising by retailers.

3/ Not included in original regression analysis.

graph labeled method A indicates for each month the percent by which actual sales were overestimated or underestimated. The estimate of sales for each month was made by using the results of the regression analysis. For 26 of the 40 months, actual sales differed from estimated sales by about 6 percent or less, and in 16 months the difference was about 2 percent or less. In some of the other months, however, the difference between predicted sales and actual sales was fairly large. Sales were also estimated for 2 months--May and June 1956--not included in the original regression analysis to obtain further evidence as to the reliability of the estimates. These differences were 7 percent for May and 16 percent for June.

The instances of great divergence between estimated and actual sales suggested that an additional variable affecting the sales of lamb had not been taken into consideration in developing the estimating procedures. Another factor influencing sales and not included in the analysis was the merchandising activities of retailers. The assumption was made that aggressive merchandising (especially display area and assortment of cuts available) of retailers for lamb and other meats during a given month probably would be reflected in their newspaper advertising. Hence, the extent of newspaper advertising for lamb, other meats, and poultry was included in a second regression analysis. These data were obtained by measuring for each month the size of meat and poultry advertisements appearing in each of the 3 Cleveland daily newspapers. Each advertisement was weighted according to the relative volume of business of the retailer sponsoring the advertisement and according to the daily circulation of the newspaper in which the advertisement appeared. This variable, when included in the analysis, was stated in terms of the ratio of lamb advertising to advertising of other meats and poultry.

The resulting estimating procedure was improved considerably. The standard error of the new estimating equation was 26 percent less than the standard error of the first. The independent variables, including advertising for lamb and other meats by retailers, explained 86 percent of the month-to-month variation in lamb sales. ^{6/} Moreover, in terms of relative importance, advertising by retailers was the second most important factor affecting lamb sales. Again, it should be emphasized that impressive store displays probably

^{6/} The regression equation obtained was as follows:

$$(2) X_1' = -37.2 - 7.1X_2 + 3.4X_3 + 8.7X_4 + 9.4X_5 + 7.4X_6$$

(-4.6) (1.4)* (2.3) (7.0) (9.9)

R = 0.930. Standard error of estimate = 41.2

	Mean values
X ₁ = Estimated monthly sales of lamb.....	712.2 (Thous. lbs.)
X ₂ = Composite retail price of lamb.....	68.1 (Cents)
X ₃ = Composite retail price of other meats and poultry.....	63.1 (Cents)
X ₄ = Total consumer earnings in Cleveland.....	27.4 (Mil. dols.)
X ₅ = Advertising of lamb.....	4.2 (Pct. of tot.)
X ₆ = Seasonal.....	100.0 (Percent)

The numbers in parentheses are "t" ratios and R is the coefficient of multiple correlation.

*Not statistically significant.

accompanied the intensive advertising and may have been partly responsible for the observed increase in sales.

The results of the second regression were used to compute new estimates of monthly sales of lamb. The improvement in the estimating procedure that resulted from including advertising by retailers as a variable affecting sales can be seen by comparing method B with method A in figure 1. For example, August 1954, during which retailers promoted lamb extensively in the newspapers showed a difference of 15 percent between estimated and actual sales in the first regression and a difference of less than 2 percent in the second analysis. Similarly, estimated sales agreed more closely with actual sales in other months which previously showed considerable differences. This is particularly noticeable for August, September, and October 1953.

New estimates were also computed for May and June 1956 which, as indicated earlier, were not included in the original regression analysis. The average difference for those 2 months between estimated and actual sales was reduced from 11 percent to 7 percent. For the entire 42-month pre-promotion period, the average difference between predicted sales and actual sales was 4.4 percent.

Results of Promotional Program

From the preceding results, it appears that the regression equation obtained can be used to estimate the normally expected volume of lamb sales

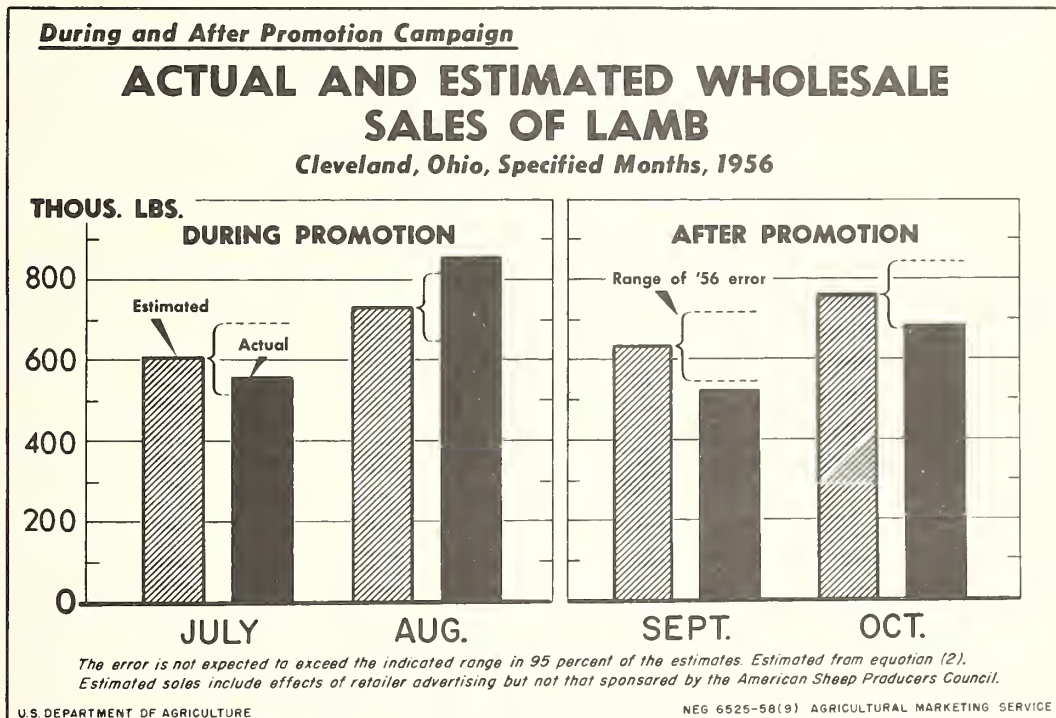


Figure 2

in Cleveland during a particular month. Assuming this to be the case, the effectiveness of the promotional program can be appraised by comparing actual sales during the promotional period with the level of sales normally expected as derived from the estimating procedure.

Figure 2 shows predicted sales and actual sales during the 2 months of promotion and for 2 months after the intensive promotional program had ceased. The predicted sales in each case are, of course, based upon the prevailing prices of lamb and of other red meats and poultry, total consumer earnings, extent of advertising by retailers, and season of the year. It should be noted that the advertising by retailers does not include the direct advertising by the American Sheep Producers Council. As was shown in the previous graph, each estimate of sales differed somewhat from actual sales. It is likely that this will also be the case when estimating the normally expected volume of sales during the promotional periods.

An indication of how much chance variation would be expected between estimated sales and actual sales for a particular prediction can be gained by computing a standard error of forecast for each estimate. For example, the brackets in figure 2 show a range of 2 standard errors for each prediction. The odds are 95 out of 100 that the chance variation between predicted sales and actual sales will be no greater than the range indicated by the brackets. If, however, actual sales fall outside the range of the brackets the odds are more than 95 out of 100 that the difference between the two is due to some new influence in the market.

During July, the first month of promotion, actual sales were somewhat below predicted sales but well within the range of expected levels. Consequently, the effects of the promotional campaign during the first month were not reflected in terms of increased sales. In August, actual sales exceeded estimated sales by a greater margin than the range of likely error indicated by the bracket. Actual sales exceeded the normally expected level by about 14 percent.

The question arises whether this difference is merely the result of chance variation or is due to the influence of the advertising efforts of the Council. Additional information concerning this question can be gained by a closer examination of the estimate and its reliability. ^{7/} By referring to table 3, it can be noted that actual sales did not differ from estimated sales by as

^{7/} The combination of values of the independent variables on which the estimate is based falls within the range of the combination of values included in the regression analysis. Hence, no extrapolation beyond the range of the original data was involved. However, there was, of course, extrapolation beyond the time period of the original data. This was the case for each of the 4 months for which predictions were made. The degree of extrapolation involved in each estimate was determined by application of a chi-square test proposed by Waugh and Been. Waugh, F. V. and Been, R. O. "Some Observations About the Validity of Multiple Regressions," Statistical Journal of the College of the City of New York, 1(1):6-14. Jan. 1939.

much as 14 percent in any of the 40 months for which estimates were made. Also the difference was less than 14 percent for the 2 non-promotion months not included in the regression analysis. From a statistical standpoint, the odds are only about 3 out of 100 that estimated and actual sales would differ by 14 percent as a result of chance variation. On the other hand, the odds are about 97 out of 100 that the difference is due to a change in the market.

Such changes could result from the influence of new variables or a change in the old relationships. Advertising by the Council was the only known new variable in the market. Hence, assuming that the basic relationships established for the base period still hold, it would appear that the promotional campaign by the Council accounted for the difference between actual sales and those normally expected, and thus the campaign was successful in stimulating the demand for lamb.

It might be added that the estimated sales for August took into consideration the intensified newspaper advertising by retailers. The assumption was made that retailers might have advertised to the extent observed had no appeal for cooperation in the overall campaign been made by the Council. This assumption was made in light of the fact that a review of newspaper advertising in the 42 months prior to the Council's promotion indicated that retailers featured lamb occasionally on their own. Interviews with the larger retailers in the market failed to disclose with certainty to what extent their advertising of lamb during August 1956 was to support and tie-in with the overall campaign conducted by the Council. Their responses indicated that willingness to cooperate with campaigns in general depended upon the supply-price conditions of the commodity being promoted. Thus, it is not possible to say categorically how much, if any, of the increased out-of-store promotion by retailers was inspired by the Council's program. If, however, part or most of the advertising by retail stores was motivated by activities of the Council, the promotional program was somewhat more effective than indicated. For example, if it is assumed that the advertising by retailers was inspired by the promotional activities of the Council, sales of lamb during August were about 21 percent above the levels expected otherwise.

Sales of lamb during September and October provide information concerning consumption patterns after the intensive promotional activities had ceased. The data indicate that the effects of the promotional campaign were of a temporary nature at least in the short run. After the intensive promotional program had ceased, sales were below the normally expected levels. In fact, the decrease in sales during September almost corresponded to the increase observed in August. During October, sales barely fell within the range of levels one would expect without promotion.

These results indicate: (1) That short intensive programs can move larger supplies and may be especially useful in marketing seasonal surpluses and (2) that research is needed to determine whether sales will hold part or all of the initial increase if promotional activities are sustained.

The effects of the July 1956 campaign on September and October sales are similar to observations made from the advertising independently sponsored by

retailers during the 42-month pre-promotion period. In most instances during this 42-month period, when retailers independently promoted lamb heavily, increased sales resulted. However, during the month or two following these promotions, sales declined more than anticipated. For example, retailers advertised lamb extensively during August 1954 and May 1955. In each case, sales increased during promotion and the actual decline in sales the following month was greater than expected according to the estimate (fig. 1). September and October 1953 were also heavy promotion months which showed increases in sales followed by greater than expected declines in December.

SALES OF LAMB AT RETAIL

Procedure

The retail information is based on data obtained from audits of a probability sample of 55 retail food stores. Three audits were made, each covering a 2-week period: April 16-May 2, 1956, before the intensive promotional program; August 6-August 22, 1956, during the height of the promotional program; and September 24-October 10, 1956, after the intensive promotional activities had ceased.

During each retail audit period, data were collected from each sample store on lamb sales volume, price, display space, and extent of in-store and newspaper advertising. Also during each audit, display space allocated to competing red meats, poultry, and fish was recorded. Two visits were made to each sample store during each week of an audit, to collect data on shifts that might have occurred in display practices between the first and last parts of the week.

Results of Campaign

The retail store data provide further insight as to the effectiveness of the promotional campaign by reflecting sales response in different types of stores and in different economic areas.

An increase in retail sales was observed during promotion, but the increase was not so sharp as that indicated by wholesale sales. The difference in magnitude of increase shown by the 2 series of sales data may be attributed primarily to 3 factors. First, the sampling area from which the retail stores were selected was confined to the Cleveland city limits. About 40 percent of the population in the metropolitan area live outside the city limits and generally have above average incomes. Hence, the purchase response of this segment of the population is not proportionately reflected in retail sales. Second, the retail data do not include sales in restaurants, hotels, and other public or institutional eating places. Hence, an increase in consumption in these outlets would not be reflected in retail sales. And third, the wholesale data represent sales for the entire month while retail sales cover 2 of the 8 weeks of intensive promotional period. The audit period may not have included the weeks in which sales were at a peak.

The greatest increase in demand during promotion was observed in corporate chains (table 4). These stores, during the period of promotion, sold about 8 percent more lamb at a 3-percent higher price than before promotion. During this same period, independent stores sold about 1 percent less than before promotion at a 3-percent higher price. In terms of total consumer expenditures for lamb (sales times price), chains showed an increase of 11 percent during the promotional period. The increase in independent stores was slightly more than 1 percent.

Table 4.--Average sales per store and retail price of lamb during 3 audits, 55 retail food stores, Cleveland, Ohio, 1956

Type of store	Before promotion (April 16-May 2)		During promotion (August 6-22)		After promotion (Sept. 24-Oct. 10)	
	Sales	Price per pound	Sales	Price per pound	Sales	Price per pound
	<u>Pounds</u>	<u>Cents</u>	<u>Pounds</u>	<u>Cents</u>	<u>Pounds</u>	<u>Cents</u>
Chains-----	644	66.8	695	68.8	642	72.1
Independents--	131	61.2	129	62.9	98	60.5

The degree of success observed in the two types of stores appeared to be directly related to their lamb merchandising, such as display practices, in-store promotion, and the advertising of lamb in newspapers. In general, chain stores engaged in this type of merchandising to a much greater extent than independents. These merchandising practices are discussed in more detail in another section of the report.

The stores were also grouped according to the family income level of the areas in which they were located. A comparison of sales between these economic groups shows that sales during promotion increased in 3 of the 4 income-group areas with the greatest increases observed in those stores located in the two highest income areas (fig. 3). Stores located in those areas where the typical family income was between \$3,000 and \$3,499 showed a decrease in sales of about 2 percent during promotion while those in the next higher income group showed the greatest increase in sales of any group. In terms of total consumer expenditures for lamb, all income groups reflected increases during the promotional period (fig. 3).

A further comparison by economic groups shows that, except for the highest income bracket, the decrease in sales after promotion appeared to be related to the corresponding magnitude of increase in sales during promotion. Those income groups that showed the greatest increase in sales during promotion also showed the greatest decrease in sales after promotion. The decrease in expenditures for lamb after promotion was not so great as the decrease in quantities purchased.

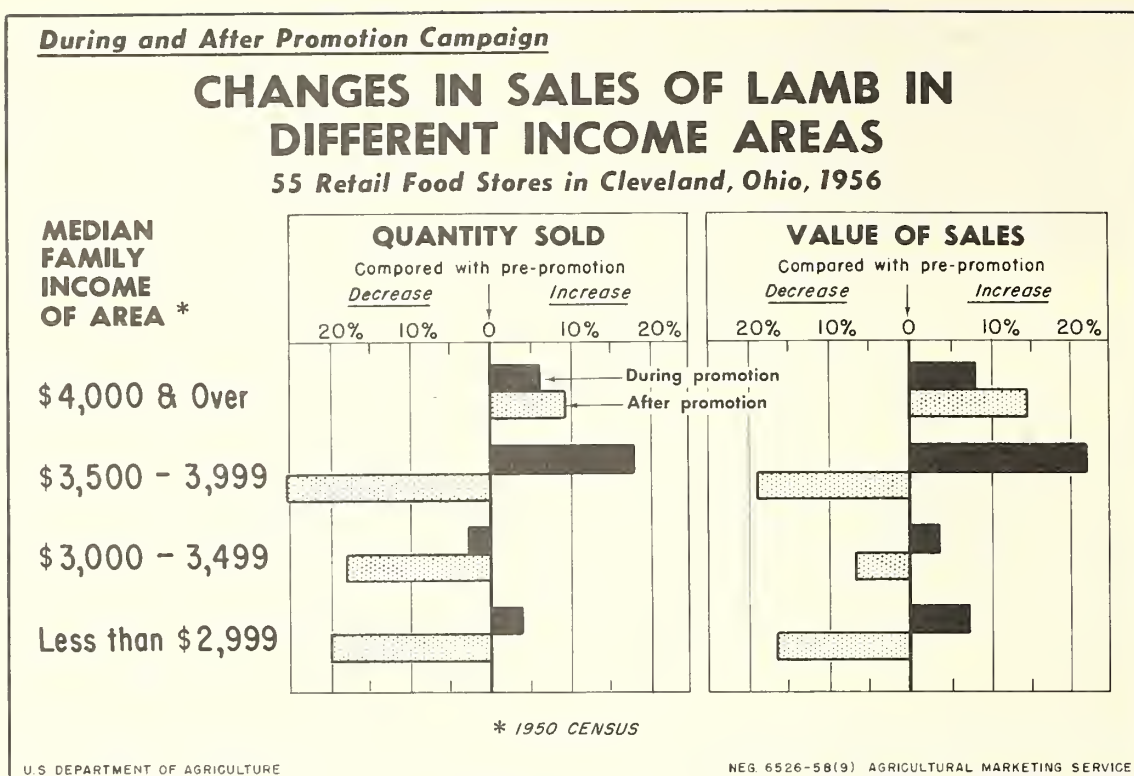


Figure 3

Merchandising Practices of Retailers

Use of Point-of-Sale Material and In-Store Advertising

Field representatives of the American Sheep Producers Council and its advertising agency distributed point-of-sale materials designed to encourage in-store promotion of lamb. Two approaches were used in distributing these materials and informing retailers of the planned promotional campaign. Chain organizations were approached directly by the Council's agents while independent outlets generally received in-store materials through wholesalers serving them.

A greater proportion of chain stores than independents used in-store advertising for promoting the sale of lamb. This pattern was observed during each of the three audit periods. Moreover, during the promotion period, the proportion of chains using point-of-sale materials for lamb doubled while the proportion of independents decreased (fig.4). This suggests that the method of distributing advertising materials to independent retailers was not effective and might be improved by using direct contact in establishing cooperation. Similar indications on the use of in-store materials by chains and independents were observed during a study conducted in Sacramento. ^{8/}

^{8/} Grubbs, V. D., Clement, W. E., and Hunter, J. S. "Results of a Promotional Campaign for Lamb in Sacramento, Calif.," U. S. Dept. Agr., Agr. Mktg. Serv., Mktg. Res. Rpt. 200. 92 pp. October 1957.

CHAIN AND INDEPENDENT STORES USING IN-STORE PROMOTION FOR LAMB

55 Retail Food Stores in Cleveland, Ohio, 1956

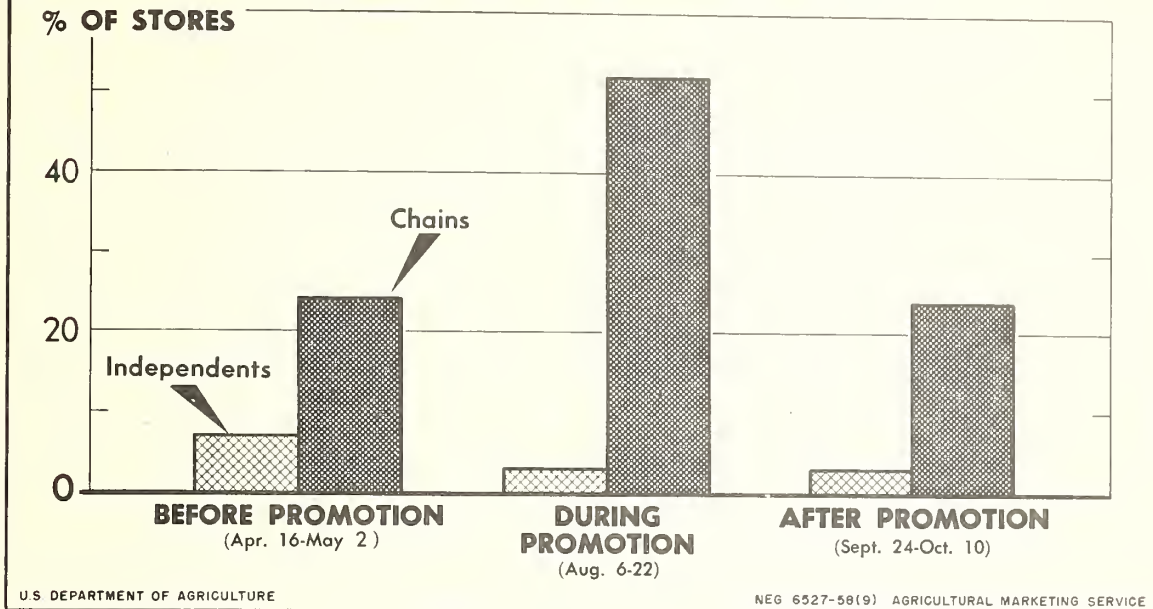


Figure 4

Display Space

Another indication of the extent to which retailers coordinated their merchandising practices with the overall campaign can be gained by examining the proportion of the total meat display space allotted to lamb during each audit period. The amount of display space given a product generally influences sales and it is one of the major means by which retailers suggest its purchase to consumers.

During each audit, each of the other red meats and poultry was given a larger proportion of total meat display space than lamb (table 5). Fish was the only item which ranked lower. For all retail audits combined, the average proportion of meat display space allotted to lamb was slightly under 6 percent (fig.5). This is in contrast to results from the Sacramento study which showed that retailers allocated almost 10 percent of their meat display space to lamb.

An increase was observed in the proportion of meat display space given lamb during the period of promotion. The average space for all stores increased from 6.0 to 6.8 percent of the total meat display (a 13-percent increase). However, the increase was not uniform for chains and independents (table 6). Chains increased the proportion of meat display allotted to lamb from 6.3 percent before promotion to 7.5 percent during promotion (a 19-percent increase). Independents increased from 5.8 percent before promotion to 6.3 percent during

Table 5.--Average display space per store for selected meats during 3 audits, 55 retail food stores, Cleveland, Ohio, 1956

Type of meat <u>1/</u>	Before promotion (Apr. 16 - May 2)		During promotion (Aug. 6 - 22)		After promotion (Sept. 24 - Oct. 10)	
	Square inches	Percent	Square inches	Percent	Square inches	Percent
Lamb -----	222	6.0	242	6.8	170	4.8
Beef -----	1,334	36.0	1,295	36.3	1,288	36.0
Pork -----	1,164	31.4	1,020	28.6	1,091	30.5
Veal -----	370	10.0	355	10.0	365	10.2
Poultry -----	480	13.0	525	14.7	526	14.7
Fish -----	131	3.5	127	3.6	137	3.8
Miscellaneous -----	2	0.1	<u>2/</u>	<u>3/</u>	<u>2/</u>	<u>3/</u>
All meats -----	3,703	100.0	3,564	100.0	3,577	100.0

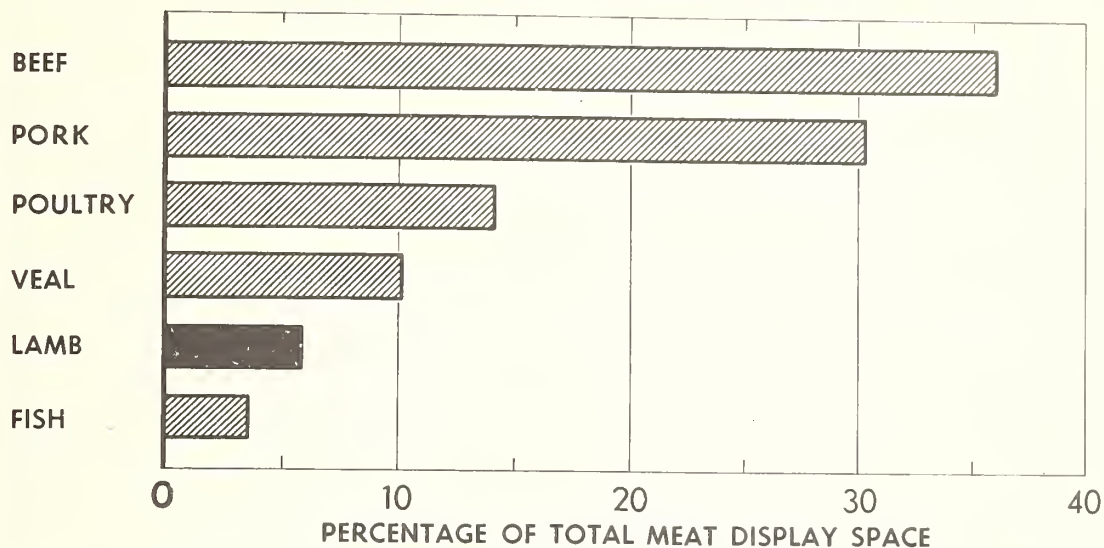
1/ Includes frozen meat and excludes canned and processed meats, small seafood, and frozen dinners.

2/ Less than 1 square inch.

3/ Less than 0.05 percent.

DISPLAY SPACE ALLOCATED TO LAMB AND COMPETING MEATS

55 Retail Food Stores in Cleveland, Ohio, 1956



AVERAGE FOR 3 PERIODS; APRIL 16-MAY 2, AUGUST 6-22, SEPTEMBER 24-OCTOBER 10

U.S. DEPARTMENT OF AGRICULTURE

NEG 6528-58(9) AGRICULTURAL MARKETING SERVICE

Figure 5

promotion (a 9-percent increase). On the basis of percentage changes, the increase in chain stores was twice as great as the increase in independents (fig. 6). Additional data relating to the display practices of retailers are presented in the appendix, tables 39 through 41.

Table 6.--Average display space per store and proportion of space for lamb during 3 audits, by type of store, 55 retail food stores, Cleveland, Ohio, 1956

Audit period	Chain stores		Independent stores	
	<u>Square inches</u>	<u>Percent</u>	<u>Square inches</u>	<u>Percent</u>
Before promotion--	798	6.3	153	5.8
During promotion--	922	7.5	160	6.3
After promotion---	654	4.9	112	4.6

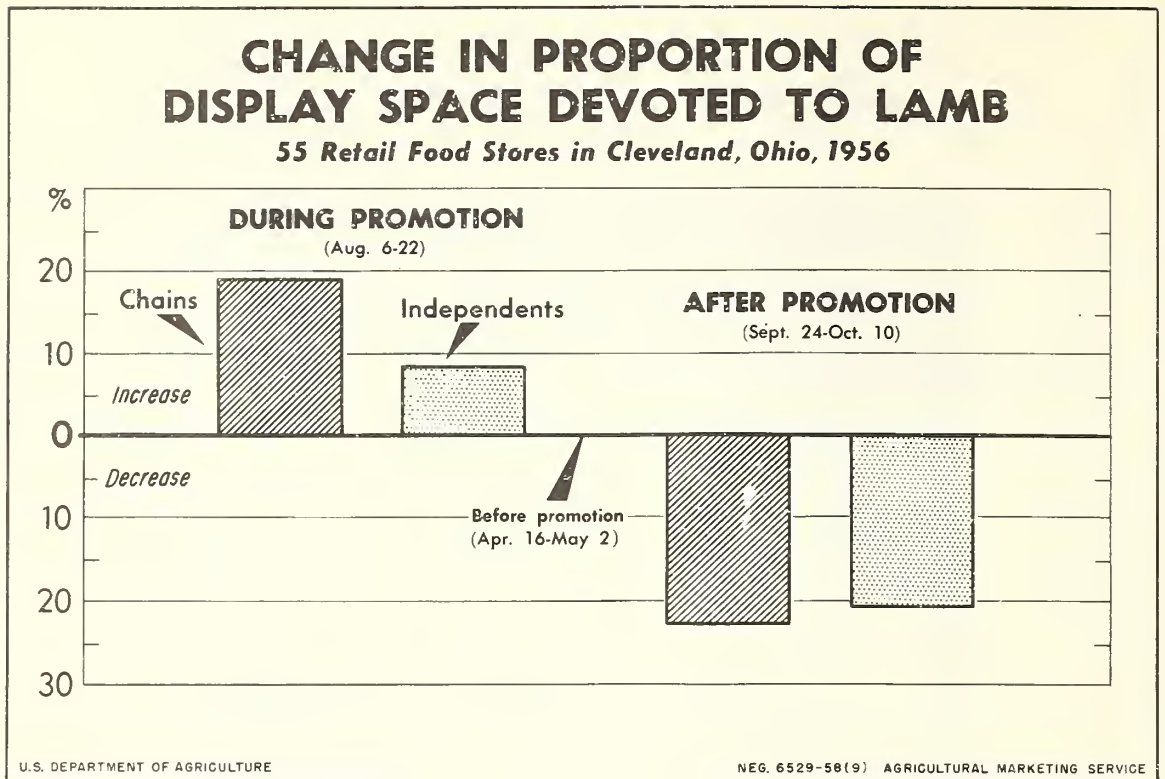


Figure 6

Kinds of Cuts Displayed

A merchandising principle developed from research studies of other commodities states that sales of a product tend to change in relation to the variety in which it is offered. ^{9/} Data were obtained concerning the kinds of cuts displayed during each visit to the stores. A multiple regression analysis was made to determine the extent to which kinds of cuts displayed in each store were associated with resulting sales. The dependent variable was sales of lamb in each store. The independent variables were: (1) Size of store as measured by number of checkout counters; (2) variety of lamb offered consumers in each store as indicated by the different kinds of cuts displayed; and (3) income area in which the store was located. The variables were expressed in terms of absolute first differences of the actual data. ^{10/} The

^{9/} Lee, W. A., Hoofnagle, W. S., and Smith, H. M.; "Merchandising Builds Produce Sales," U. S. Dept. Agr., Agr. Mktg. Serv., Marketing Activities, No. 19 (3):3. March 1956.

^{10/} A first difference is the change in value from the preceding observation.

results showed that the independent variables used in the analysis explained 66 percent of the variation of lamb sales between stores. 11/

Variety of lamb cuts offered was one of the major factors associated with sales. Each kind of cut added to the display, on the average, was associated with an increase in sales of 15 percent. It should be pointed out, however, that a small part of this increase may have been due to a simultaneous increase in the proportion of total meat display space allocated to lamb. But such influence was very small since the simple correlation coefficient between variety of lamb cuts displayed and proportion of total meat display space given to lamb was only 0.19. This finding suggests that availability of a variety of lamb cuts in the stores is important in aggressive merchandising of lamb and, within limits, is a means of stimulating sales at the retail level.

Chain stores generally displayed a wider variety of cuts than independents. For all audits, chains on the average displayed 5 to 6 kinds (table 7). Independents displayed 1 to 2 cuts. These differences may be due to differences in the size of chain and independent stores. About 96 percent of the chain stores in the sample exceeded an annual sales volume of \$100,000, while about three-fourths of the independent stores had an annual sales volume below this amount. Although both types of stores increased the proportion of total meat display space allocated to lamb during promotion, only chains increased the variety of cuts displayed. This may partly account for the greater increase in demand reflected by chains during the promotional period.

The kind of cut most frequently displayed in both types of stores was leg of lamb. However, a larger proportion of chain stores than independents displayed this cut. Almost 8 in 10 chains had leg of lamb on display during the store visits compared to about 3 in 10 independents. The relative importance of the remaining cuts varied by type of store and audit period (table 8).

Another merchandising practice common to both types of stores was the manner in which the different sections of the carcass were cut and displayed to consumers. Where retailers had a choice of cutting a particular section of

$$\underline{11/} (2.0) X_1 = -21.7 + 40.5X_2 + 62.8X_3 + 0.04X_4$$

$$(6.73) \quad (4.52) \quad (0.57)*$$

Mean values of actual data

R	=	81	
X ₁	=	Store sales.....	262.2 (Pounds)
X ₂	=	Number of kinds of cuts displayed.....	3.3 (Number)
X ₃	=	Size of store.....	2.7 (No. checkout counters)
X ₄	=	Income area in which store is located....	1156.32 (Dollars per capita)

The numbers in parentheses are "t" ratios. The symbol R is the coefficient of multiple correlation.

*Not statistically significant.

Table 7.--Average number of cuts of lamb displayed by type of store during 3 audits in Cleveland, Ohio, 1956 1/

Type of store	Before promotion	During promotion	After promotion	Average all audits
	<u>Number</u>	<u>Number</u>	<u>Number</u>	<u>Number</u>
Chain-----	5.34	6.20	5.03	5.52
Independent <u>2/</u> ---	1.99	1.75	1.35	1.70

1/ Cuts of lamb normally displayed were: Leg, loin chops, rib chops, square cut shoulder, arm chops, shoulder chops, blade chops, neck slices, breast, shank, stew meat, and ground lamb.

2/ Includes a small number of voluntary chains.

the carcass into chops or roasts, chops generally were chosen. This was particularly true of the loin and rack sections. An exception was observed for shoulder cuts among independent stores. A greater proportion of the independents cut and displayed shoulder in the form of roast than in the form of chops.

Pricing Practices

One of the major problems in merchandising lamb as well as other red meats is the pricing of cuts from different parts of the carcass. Generally, as one would expect, the more popular cuts such as leg roast, loin chops, and rib chops account for much more than a proportionate share of the total carcass value because of a weak demand for the less preferred cuts. Tables 9 and 10 show the composite value of retail cuts obtained from 100 pounds of carcass in chain and independent stores. Loin chops, which accounted for about 10 percent of the carcass weight, constituted 21 percent of the carcass value. Rib chops accounted for about 6 percent of the carcass weight and 10 percent of the carcass value. On the other hand, breast, which accounted for about 5 percent of the carcass weight, constituted little more than 1 percent of the carcass value.

Part of the promotional campaign was directed at improving the demand for some of the less popular cuts with the objective of bringing about a more favorable average price for the carcass. It appears that the price relationship between cuts changed only slightly during each audit period. One difference was observed, however, between the pricing practices in Cleveland and those shown in the Sacramento market. When the price of lamb increased in Sacramento, the more popular cuts bore all the price increase while the price of the less preferred cuts remained about the same. In the Cleveland market, most cuts were increased in the chain stores, and in about

Table 8.--Percentage of stores displaying specified lamb cuts during 3 audits, by type of store, Cleveland, Ohio, 1956

Kind of cut	Before promotion (Apr. 16 - May 2)		During promotion (Aug. 6 - 22)		After promotion (Sept. 24 - Oct 10)	
	Chain	Inde- pendent ^{1/}	Chain	Inde- pendent ^{1/}	Chain	Inde- pendent ^{1/}
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Leg -----	72.0	33.3	84.0	36.7	76.0	23.3
Loin chops -----	48.0	16.3	52.0	16.3	40.0	4.7
Loin roast -----	3.6	8.0	<u>2/</u>	2.0	0.8	3.3
Rib chops -----	52.0	16.7	64.0	13.3	52.0	10.0
Rib roasts -----	1.6	3.3	1.6	1.3	<u>2/</u>	<u>2/</u>
Square cut shoulder	24.0	33.3	40.0	30.0	20.0	20.0
Cushion shoulder --	0.4	2.0	.8	<u>2/</u>	1.6	1.3
Rolled shoulder ---	8.0	<u>2/</u>	3.6	<u>2/</u>	4.0	<u>2/</u>
Arm chops -----	20.0	<u>2/</u>	24.0	5.3	20.0	5.3
Blade chops -----	16.0	1.7	60.0	8.7	52.0	9.7
Shoulder chops ----	64.0	20.0	48.0	9.7	48.0	4.0
Neck slices -----	28.0	14.7	32.0	12.0	20.0	9.3
Breast -----	68.0	20.0	68.0	23.3	60.0	20.0
Shank -----	44.0	23.3	44.0	16.7	28.0	8.7
Stew meat -----	28.0	5.7	36.0	2.3	20.0	4.3

^{1/} Includes a small number of voluntary chains.

2/ Not displayed.

Table 9.--Composite retail sales value of cuts obtained from 100 pounds of lamb carcass in corporate chainstores during 3 audits, Cleveland, Ohio, 1956

Lamb cut	Before promotion April 16- May 2		During promotion August 6 - 22		After promotion Sept. 24 - Oct. 10	
	Value	Percentage of carcass value	Value	Percentage of carcass value	Value	Percentage of carcass value
Leg of lamb -----	<u>Dollars</u> 15.20	<u>Percent</u> 24.5	<u>Dollars</u> 16.28	<u>Percent</u> 25.2	<u>Dollars</u> 17.15	<u>Percent</u> 25.0
Sirloin chop -----	6.54	10.6	6.24	9.7	6.24	9.1
Loin chop -----	13.11	21.2	13.30	20.6	14.08	20.5
Rib chop -----	6.32	10.2	6.61	10.2	7.19	10.5
Blade rib chop -----	1.19	1.9	1.41	2.2	1.41	2.0
Square cut shoulder roast -----	13.56	21.9	14.25	22.1	15.63	22.8
Stew meat -----	2.57	4.2	2.96	4.6	2.90	4.2
Neck -----	.82	1.3	.74	1.2	1.05	1.5
Breast -----	.76	1.2	.86	1.3	1.00	1.5
Shank -----	1.87	3.0	1.90	2.9	1.98	2.9
Total -----	61.94	100.0	64.55	100.0	68.63	100.0

Table 10.--Composite retail sales value of cuts obtained from 100 pounds of lamb carcass in independent stores during 3 audits, Cleveland, Ohio, 1956

Lamb cut	Before promotion Apr. 16 - May 2		During promotion August 6 - 22		After promotion Sept. 24 - Oct. 10	
	Value	Percent of total carcass value	Value	Percent of total carcass value	Value	Percent of total carcass value
Leg of lamb -----	<u>Dollars</u> 15.85	<u>Percent</u> 27.4	<u>Dollars</u> 16.28	<u>Percent</u> 27.1	<u>Dollars</u> 15.85	<u>Percent</u> 26.6
Sirloin chop -----	6.54	11.3	6.24	10.4	6.24	10.5
Loin chop -----	9.42	16.3	10.29	17.1	11.46	19.3
Rib chop -----	5.10	8.8	5.45	9.1	4.58	7.7
Blade rib chop ---	1.47	2.5	1.45	2.4	1.21	2.0
Square cut shoulder roast -----	13.79	23.9	15.17	25.3	15.40	25.9
Stew meat -----	1.84	3.2	1.64	2.7	1.05	1.8
Neck -----	0.97	1.7	0.82	1.4	1.08	1.8
Breast -----	.86	1.5	.90	1.5	0.90	1.5
Shank -----	1.94	3.4	1.79	3.0	1.75	2.9
Total -----	57.78	100	60.03	100	59.52	100

the same proportion, when the overall price of lamb increased. Additional information concerning prices of various lamb cuts in different types of stores is given in the appendix--tables 42 through 47.

APPENDIX

Part I, Technical Notes, Consumer Surveys

Sampling error.--Data obtained from household consumer sample surveys are subject to sampling error and may differ somewhat from the results of a complete census. Statistical techniques are, however, available for estimating the magnitude of this difference. For example, 49 percent of the respondents interviewed in June 1955, and 56 percent of those interviewed in October 1956 reported that they had served lamb to their families in the preceding year. The chances are about 2 out of 3 that the 1955 estimate is within 2 percent and the 1956 estimate within 3 percent of the values that would have been obtained from a complete census in 1955 and again in 1956.

An estimate of the magnitude of the error due to sampling is also required when comparisons are made between the results of two surveys. If no change had occurred in the use of lamb between June 1955 and October 1956, the chances are only about 1 in 20 that surveys made in those months would yield estimates of use as different as 49 percent and 56 percent. Similar methods are used in determining the significance of differences between subgroups within a sample.

For the smaller groups the confidence interval is somewhat wider and differences between groups must be greater if they are to be considered statistically significant. In this report, no differences are regarded as significant if the probability of their occurrence as a result of sampling error is more than 1 in 3.

The formula used for determining the confidence intervals was:

$$1.25 \sqrt{\frac{pq}{n}}$$

Where p is the proportion of respondents possessing the given characteristic
q is the proportion of respondents not possessing a characteristic (100-p)
n is the number of cases.

The formula used for determining the significance of observed differences between samples and between subgroups within a sample was:

$$1.25 \sqrt{\frac{p_1 q_1}{n_1} + \frac{p_2 q_2}{n_2}}$$

Where p, q, and n have the same meanings as before and the subscripts refer to the different samples or subgroups.

The factor of 1.25 in both formulas was used to correct for the effect of clustering. Experience with samples similar in design to those drawn for these surveys indicates that this weighting provides a satisfactory correction for formulas used in making estimates from simple random samples.

Sample weighting.--In the June 1955 survey, lamb use was determined for all eligible respondents, but only a subsample of nonusers was interviewed. It was therefore necessary to adjust the data when characteristics of users and nonusers were compared. Since 507 nonusers were identified in the sample, the factor of $\frac{507}{299} = 1.695$ was used to weight the data for nonusers. In the

October 1956 survey all eligible respondents, whether users or nonusers, were interviewed, and no adjustment of the data was necessary.

Sample comparisons.--In examining the June 1955 and the October 1956 samples for evidence of bias, comparisons were made between the 2 samples on 3 characteristics which were found in the June survey to be related to lamb use--age of the homemaker, educational level of the homemaker, and total family income. This comparison revealed slight differences between the 2 samples on 1 characteristic; in the June 1955 survey a slightly larger proportion of respondents were in the upper income group.

To determine the effect of this difference on survey results, the number of lamb users obtained from the October survey was adjusted by weighting each income level by the sample proportions from the June survey. This adjustment showed that differences in the estimates of lamb users that might have resulted from sample differences were negligible.

Part II, Technical Notes, Market Data

Retail Store Sample.--A probability sample of 55 retail food stores and meat markets was selected from the city directory of Cleveland, Ohio. The universe from which the sample was drawn was defined as all retail food stores falling within the city limits of Cleveland. Ideally, the universe would have been defined as the metropolitan area of Cleveland. However, a complete list of stores covering the metropolitan area was not available.

The sample was stratified by chains and independents to attempt to gain greater precision in the sample estimates. The number of stores within each stratum was selected on a disproportionate basis to take into account the heterogeneity of variation of the different strata. Stores within each stratum were selected at random. Twenty-five corporate chain stores, 6 voluntary chain stores, and 24 independents fell within the sample.

Seasonal Factor.--In the initial stages of developing the estimating equation, it was assumed that monthly wholesale lamb sales were a function of the price of lamb, the price of other meats and poultry, total consumer earnings, and extent of retailer advertising of lamb. It can be noted that no provision was made for including season as a factor affecting the sales

of lamb. When the residuals (actual sales minus estimated sales) from this analysis were plotted they appeared to be directly related to month of year (table 11 and figure 7). For example, the residuals for May of each year are negative and of similar magnitudes. The relative consistency of the pattern of the residuals from year to year suggested that seasonal influence was another factor strongly affecting the sales of lamb during any given month. Therefore, a seasonal factor for each month was developed by computing the ratio of average actual sales for that month to average estimated sales for the same month. Estimates of sales were obtained from the original regression analysis. The resulting ratios were included in a second regression as one of the independent variables.

One limitation of using these residuals as indicators of the seasonal influence is the limited number of years for which data are available. Hence, it must be assumed that the months used are fairly typical. As far as can be determined from national data, this appears to be a valid assumption.

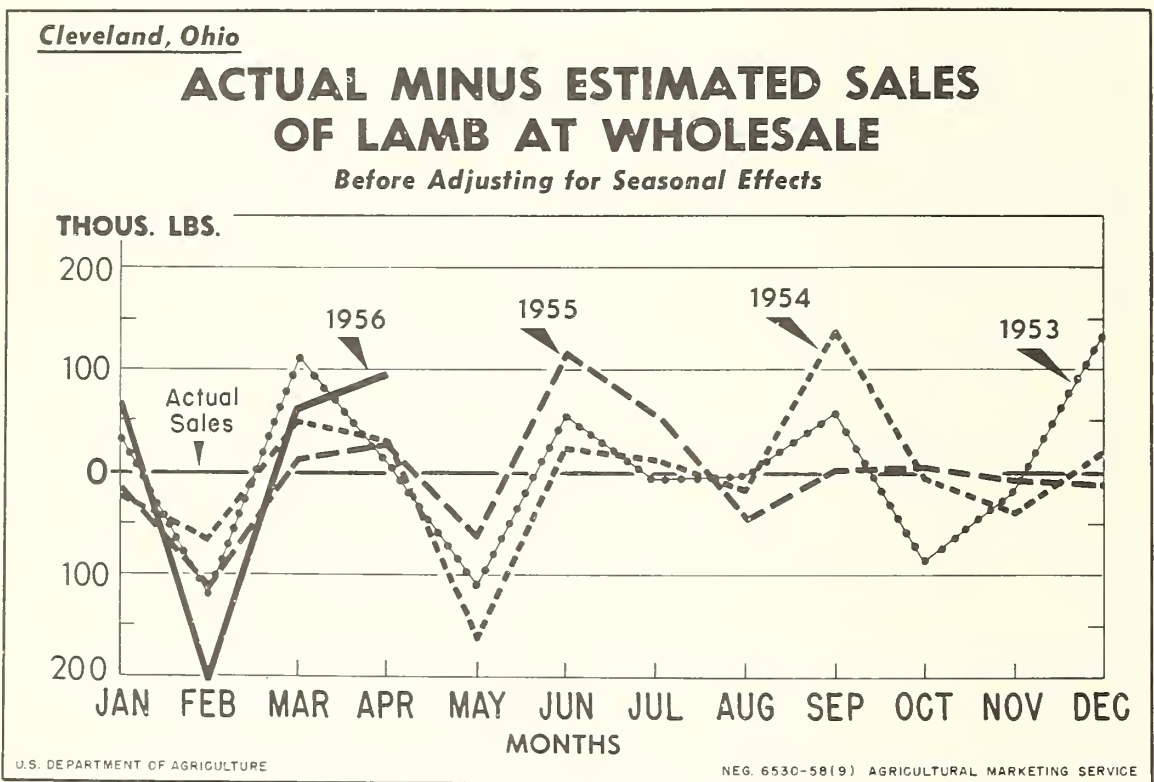


Figure 7

Table 11.--Residuals of wholesale lamb sales before including seasonal as one of the independent variables, Cleveland, Ohio, 1953-56

Month	1953	1954	1955	1956
	<u>Thousand pounds</u>	<u>Thousand pounds</u>	<u>Thousand pounds</u>	<u>Thousand pounds</u>
January -----	34.1	-25.0	-15.0	67.4
February -----	-119.4	-69.2	-112.5	-206.6
March -----	112.8	49.3	12.5	62.5
April -----	10.7	29.2	25.6	95.1
May -----	-109.3	-162.9	-63.9	
June -----	53.5	24.2	113.4	
July -----	-4.0	10.7	56.3	
August -----	-2.0	-14.6	-46.5	
September ----	58.7	136.0	1.0	
October -----	-82.7	-2.5	4.7	
November -----	-17.3	-39.4	-6.6	
December -----	133.5	19.0	-10.9	

Table 12.--Relation between awareness of the promotional program, source of awareness, and use of lamb, Cleveland, Ohio, October 1956

Awareness of promotion and source of awareness	All home- makers	Homemakers who use lamb ^{1/}				Homemakers who do not use lamb
		All lamb users	Frequent users	Moderate users	Infrequent users	
	Percent ^{2/}	Percent ^{2/}	Percent ^{2/}	Percent ^{2/}	Percent ^{2/}	Percent ^{2/}
Aware of promotion ^{3/}	25	32	39	31	27	17
Source of awareness:						
Advertising and com- mercials -----	24	32	45	29	23	15
Displays -----	8	9	9	10	9	6
Not aware of promotion -----	74	67	61	66	72	82
Not ascertained -----	1	1	--	3	1	1
Total -----	100	100	100	100	100	100
Number of homemakers ^{4/}	631	358	92	129	134	273

^{1/} Respondents who served lamb one or more times a week in the year preceding the survey are referred to as frequent users; those who served it between once a week and once a month are referred to as moderate users; and those who served it less often than once a month are considered infrequent users.

^{2/} Percentages add to more than their subtotals because some respondents were aware of the promotional campaign through more than 1 medium.

^{3/} Based on replies to questions concerning awareness of radio and TV commercials, newspaper advertising, and special lamb displays.

^{4/} Frequency of use was not ascertained for 3 respondents.

Table 13.--Relation between promotional methods and decision to buy lamb,
Cleveland, Ohio, October 1956

Promotional methods and decisions to buy	Homemakers who use lamb			
	All users	Frequent users	Moderate users	Infrequent users
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
DISPLAYS:				
Sometimes buy because of displays -----	51	45	56	49
Do not buy because of dis- plays -----	49	55	44	51
Total -----	100	100	100	100
ADVERTISING MEDIA: ^{1/}				
Sometimes buy because of advertisements or com- mercials -----	20	15	23	19
Do not buy because of ad- vertisements or com- mercials -----	80	85	77	81
Not ascertained -----	^{2/}	^{2/}	--	--
Total -----	100	100	100	100
SUGGESTIONS OF CLERK OR BUTCHER:				
Sometimes buy because of suggestion -----	26	24	29	24
Do not buy because of suggestion -----	74	76	71	76
Total -----	100	100	100	100
Number of homemakers ^{3/} -	358	92	129	134

^{1/} Includes newspaper advertisement and radio or TV commercials.

^{2/} Less than 1 percent.

^{3/} Frequency of use not ascertained for 3 respondents.

Table 14.--Relation between background characteristics and awareness of the promotional program, Cleveland, Ohio, October 1956

Background characteristics	Homemakers			
	Aware	Not aware	Total ^{1/}	
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Number</u>
Family income level: ^{2/}				
Upper -----	19	81	100	98
Middle -----	30	70	100	251
Lower -----	21	79	100	175
Educational level: ^{3/}				
College -----	24	76	100	84
High school -----	26	74	100	344
Grade school -----	25	75	100	189
Age: ^{4/}				
Over 45 -----	25	75	100	270
Under 45 -----	25	75	100	347
Race:				
White -----	24	76	100	502
Nonwhite -----	32	68	100	119

^{1/} Awareness was not ascertained for 10 respondents.

^{2/} Family income was not ascertained for 53 lamb users and 49 nonusers.

^{3/} Educational level was not ascertained for 5 nonusers.

^{4/} Age was not ascertained for 1 lamb user and 1 nonuser.

Table 15.--Use and frequency of use of lamb in the June 1955 and the October 1956 surveys, Cleveland, Ohio

Use and frequency of use	June 1955 ^{1/}		October 1956	
	Percent		Percent	
Users of lamb -----		49	-----	56
Frequent users -----	15		15	
Moderate users -----	19		20	
Infrequent users -----	15		21	
Nonusers of lamb -----		51	-----	44
Total -----		100	-----	100
Number of homemakers ^{2/} -----	998		631	

^{1/} Since not all nonusers were interviewed, the number on which the percentages in this table were based was obtained by weighting the number of nonusers to correspond to the proportion of the sample they represent.

^{2/} Frequency of use was not ascertained for 6 respondents in June 1955 and for 3 respondents in October 1956.

Table 16.--Replies to the question, "Are you using more lamb, less lamb, or about the same amount of lamb as you were using a year ago at this time?" Cleveland, Ohio, October 1956

Replies	Homemakers who use lamb			
	All users	Frequent users	Moderate users	Infrequent users
	Percent	Percent	Percent	Percent
Using more lamb -----	12	16	11	9
Using less lamb -----	18	10	20	22
Using same amount ---	70	74	68	69
Not ascertained -----	^{1/}	--	1	--
Total -----	100	100	100	100
Number of home- makers ^{2/} -----	358	92	129	134

^{1/} Less than 1 percent.

^{2/} Frequency of use was not ascertained for 3 respondents.

Table 17.--Reasons homemakers gave for changing the frequency of their use of lamb in the October 1956 survey, Cleveland, Ohio

Direction of change and the reasons for using more or less lamb	Homemakers who had changed the frequency of their use of lamb	
	<u>Percent</u>	<u>1/</u>
Using less lamb -----		61
Cost -----	20	
Dislike some characteristics -----	18	
Change in size of household -----	16	
Difficulty of preparation -----	8	
Restricted diet -----	6	
Availability -----	5	
Preference for other meats -----	4	
Poor quality of lamb -----	2	
Miscellaneous -----	3	
Using more lamb -----		39
Restricted diet -----	16	
Have acquired taste for it -----	6	
Price--seems less expensive -----	5	
Change in size of household -----	4	
Ease of preparation -----	2	
"Just like it" -----	6	
Miscellaneous -----	6	
Total -----		100
Number of homemakers -----	108	

1/ Percentages add to more than their subtotals because some respondents gave more than 1 reason.

Table 18.--Homemakers who used selected cuts of lamb in the year preceding the interview in each survey, June 1955 and October 1956, Cleveland, Ohio

Cut used	June 1955 survey	October 1956 survey
	<u>Percent</u>	<u>Percent</u>
Leg -----	64	61
Chops -----	88	88
Breast -----	24	20
Flank -----	8	6
Neck -----	16	13
Shank -----	28	22
Shoulder roast -----	28	27
Patties -----	20	20
Stew meat -----	32	31
Number of homemakers -----	487	358

Table 19.--Frequency of use of different cuts of lamb in the year preceding the interview, October 1956,
Cleveland, Ohio

Frequency of use (times per year)	All cuts of lamb	Leg	Chops	Breast	Shank	Shoul- der roast	Patties	Stew meat
	Percent	Percent	Percent	Percent	Percent	Percent	Percent	Percent
1 to 2 times -----	13	34	16	33	29	45	36	29
3 to 5 times -----	14	31	15	20	22	31	20	21
6 to 11 times -----	11	13	15	13	18	8	9	16
12 times -----	17	13	18	17	19	8	14	16
13 to 23 times -----	4	1	2	3	3	1	3	3
24 to 35 times -----	14	4	15	10	6	3	19	8
36 to 51 times -----	4	--	2	--	--	--	--	1
52 times a year -----	16	2	15	4	--	2	--	4
53 or more times -----	6	1	5	--	1	--	--	1
Not ascertained -----	1	1	1	--	1	1	--	2
Total -----	100	100	100	100	100	100	100	100
Number of home- makers -----	358	217	316	70	78	97	70	112
Median frequency of use -----	12	4	12	5	5	3	3	5

Table 20.--Background characteristics of homemakers who use and do not use lamb, October 1956 survey, Cleveland, Ohio

Characteristics	Use lamb	Do not use lamb	Total homemakers	
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Number</u>
Family income level: <u>1/</u>				
Upper -----	74	26	100	100
Middle -----	54	46	100	256
Lower -----	53	47	100	176
Educational level: <u>2/</u>				
College -----	72	28	100	86
High school -----	53	46	100	340
Grade school -----	58	42	100	190
Age: <u>3/</u>				
Over 45 -----	73	27	100	275
Under 45 -----	44	56	100	354
Race:				
White -----	56	43	100	510
Nonwhite -----	57	43	100	121
Size of household:				
Small -----	59	41	100	229
Medium -----	59	41	100	259
Large -----	48	52	100	143

1/ Family income was not obtained for 53 lamb users and 46 nonusers.

2/ Educational level of the respondent was not obtained for 5 nonusers.

3/ Age of respondent was not obtained for 1 lamb user and 1 nonuser.

Table 21.--Relation between awareness of the promotional campaign and use and frequency of use of lamb at the time of the October 1956 survey, Cleveland, Ohio

Use and frequency	Respondents who were --			
	Aware		Unaware	
	Percent		Percent	
Users of lamb -----	71		52	
Frequent users -----	23		12	
Moderate users -----	25		19	
Infrequent users -----	23		21	
Not ascertained -----	1/		1/	
Nonusers of lamb -----	29		48	
Total -----	100		100	
Number of homemakers 2/	159		462	

1/ Less than 1 percent.

2/ Awareness of promotion was not ascertained for 10 respondents.

Table 22.--Relation between awareness of the promotional campaign and replies to the question, "Are you now using more lamb, less lamb, or about the same amount of lamb as you were using a year ago at this time?" October 1956 survey, Cleveland, Ohio

Replies	Respondents who use lamb		
	All users	Aware users	Unaware users
	Percent	Percent	Percent
Using more lamb -----	12	20	8
Using less lamb -----	18	12	21
Using same amount -----	70	68	70
Not ascertained -----	1/	--	1
Total -----	100	100	100
Number of homemakers 2/	358	113	240

1/ Less than 1 percent.

2/ Awareness of promotion was not ascertained for 5 respondents.

Table 23.--Relation between awareness of the promotional campaign and use of new cuts of lamb in the year preceding the October 1956 survey, Cleveland, Ohio

Use of new cuts and cuts used	Homemakers who were --			
	Aware		Unaware	
	Percent	1/	Percent	1/
Had used a new cut -----	6		6	
Leg -----	2		1	
Chops -----	2		1	
Breast -----	--		2/	
Neck -----	1		1	
Shank -----	1		1	
Shoulder roast -----	--		1	
Patties -----	1		1	
Stew meat -----	--		2/	
Had not used a new cut -----	94		94	
Not ascertained -----	--		2/	
Total -----	100		100	
Number of homemakers -----	113		240	

1/ Percentages add to more than the subtotal because some homemakers had used more than 1 new cut.

2/ Less than 1 percent.

Table 24.--Background characteristics of frequent, moderate, and infrequent lamb users, Cleveland, Ohio, October 1956

Characteristics	Frequent users	Moderate users	In-frequent users	All users ^{1/}	
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Number</u>
Family income level: ^{2/}					
Upper -----	30	40	30	100	74
Middle -----	25	39	36	100	138
Lower -----	28	30	40	100	93
Educational level: ^{3/}					
Grammar school ----	24	39	36	100	111
High school -----	27	32	40	100	185
College -----	16	42	32	100	62
Age: ^{4/}					
45 years and over -	30	36	33	100	200
44 years and under	20	36	44	100	157
Race:					
White -----	26	38	35	100	289
Nonwhite -----	23	31	46	100	69
Size of household:					
Small -----	32	24	16	100	134
Medium -----	34	38	38	100	152
Large -----	34	38	46	100	69

^{1/} Frequency of use was not ascertained for 3 respondents.

^{2/} Family income was not ascertained for 53 respondents.

^{3/} Educational level was not ascertained for 4 respondents.

^{4/} Age was not ascertained for 1 respondent.

Table 25.--Number of cuts of lamb used in the past year by frequency of use, Cleveland, Ohio, October 1956

Number of cuts used	All users	Frequent users	Moderate users	Infrequent users
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
1 -----	30	15	21	48
2 -----	24	28	18	28
3 -----	15	10	23	9
4 -----	12	13	17	7
5 -----	8	11	9	5
6 -----	5	13	4	--
7 -----	3	5	3	1
8 -----	2	3	4	1
9 or more -----	1	2	1	--
Not ascertained -----	<u>1/</u>	--	--	1
Total -----	100	100	100	100
Number of home-makers <u>2/</u> -----	358	92	129	134

1/ Less than 1 percent.

2/ Frequency of use was not ascertained for 3 respondents.

Table 26.--Homemakers who used selected cuts of lamb in the year preceding the interview, by frequency of use, Cleveland, Ohio, October 1956

Cut used	All users	Frequent users	Moderate users	Infrequent users
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Leg -----	61	64	68	51
Chops -----	88	95	90	83
Breast -----	20	34	19	10
Flank -----	6	14	4	2
Neck -----	13	22	16	4
Shank -----	22	36	24	10
Shoulder roast -----	27	32	36	16
Patties -----	20	22	30	8
Stew meat -----	31	45	36	18
Number of homemakers <u>1/</u> ---	358	92	129	134

1/ Frequency of use not ascertained for 3 respondents.

Table 27.--Homemakers in the lower, middle, and upper income groups who used specified cuts of lamb, Cleveland, Ohio, October 1956 survey

Cut	Income group		
	Lower	Middle	Upper
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Leg -----	58	62	69
Chops -----	88	89	88
Breast -----	23	23	12
Flank -----	5	6	4
Neck -----	16	15	5
Shank -----	24	20	23
Shoulder roast -----	24	34	19
Patties -----	20	19	23
Stew meat -----	27	30	34
Number of homemakers <u>1/</u> -	74	138	93

1/ Income level was not ascertained for 53 respondents.

Table 28.--Replies to the question, "Would you like to serve lamb more often to your family?" Cleveland, Ohio, October 1956 survey

Replies	Homemakers who use lamb			
	All users	Frequent users	Moderate users	Infrequent users
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Would like to serve more often -----	50	34	60	51
Would not like to serve more often ---	47	65	39	48
Not ascertained -----	3	1	1	1
Total -----	100	100	100	100
Number of homemakers <u>1/</u> --	358	92	129	134

1/ Frequency of use was not ascertained for 3 respondents.

Table 29.--Reasons homemakers gave for not serving lamb more often, Cleveland, Ohio, October 1956 survey

Reasons	Homemakers who would like to serve lamb more often	
	Percent ^{1/}	
Economy -----		50
Expensive, not worth the price -----	42	
Cut too large for self, family -----	8	
Cut too small for self, family -----	4	
Too much waste -----	3	
Taste -----		12
Peculiar, strange, unpleasant -----	1	
Wooly, wild -----	2	
Muttony -----	1	
Lacks flavor -----	1	
Unspecified taste dislike -----	7	
Preparation -----		12
Limited uses -----	1	
Hard to use cold -----	3	
Trouble preparing -----	1	
Takes too much time -----	1	
Unfamiliarity with ways of preparing -----	5	
Other -----	1	
Availability, stores don't carry -----		6
Odor -----		5
Disagreeable, unpleasant -----	1	
Strong -----	1	
Don't like odor while cooking -----	1	
Odor unspecified, just don't like -----	2	
Habit -----		3
Never used, never tried, never thought of it -----	2	
Other -----	1	
Texture -----		2
Fat, greasy -----	1	
Tough, stringy -----	2	
Health -----		2
Can't eat much meat -----	1	
Other -----	1	
General -----		38
Wants more variety in meats -----	4	
Someone in family doesn't like -----	27	
Don't cook much -----	2	
Past experience; get tired of it -----	1	
Past experience; mutton, lamb not fresh -----	1	
Prefer other meats -----	5	
Dislike unspecified -----	1	
Other -----		1
No answer -----		2
Number of homemakers -----	161	

^{1/} Percentages add to more than their subtotals and these add to more than 100 because some homemakers gave more than 1 reason for not serving lamb more often.

Table 30.--Reasons homemakers gave for not using lamb, Cleveland, Ohio, October 1956 survey

Reasons	Homemakers who do not use lamb					
	All nonusers		Homemakers who have not used lamb recently		Homemakers who never used lamb	
	Percent	1/	Percent	1/	Percent	1/
Flavor -----		52		53		50
Strong, rancid, old, tallow, musky, wool, wild, moldy, horrible -----	18		17		19	
Taste, unspecified--just don't like it -----	14		14		14	
Funny, peculiar, off, strange, not palatable, unpleasant, odd, sweet, foreign -----	11		10		11	
Lacks flavor or as a specific flavor -----	5		7		3	
Mutton, sheep -----	3		5		1	
Too fresh tasting, hasn't been seasoned (cured), young tasting -----	1		1		1	
Different, rich -----	2/		1		--	
Miscellaneous -----	2/		--		1	
Odor -----		25		25		24
Don't like odor while cooking -----	7		10		4	
Odor unspecified--just don't like -----	6		6		6	
Disagreeable, unpleasant -----	5		6		5	
Strong -----	4		2		5	
Funny, peculiar, odd, musky -----	3		1		6	
Odor of the fat -----	1		1		1	
Sheep-wooly -----	1		1		1	
Different -----	2/		--		1	
Miscellaneous -----	2/		1		--	
Economy -----		12		19		6
Expensive, not worth the price -----	11		17		5	
Too much waste, too much bone, shrinks -----	2		2		1	
Cut too large for self, family -----	1		2		--	
Texture -----		12		14		10
Fat, greasy, oily, tallow -----	7		9		5	
Tough, stringy, gristly -----	4		5		3	
Dry, not juicy -----	2		2		2	
Miscellaneous -----	2/		1		--	
Habit -----		11		6		14
Never had it at home -----	9		5		12	
Never thought of it -----	2		2		2	
Preparation -----		5		6		3
Unfamiliarity with ways of preparing -----	3		3		3	
Hard to use cold as leftovers -----	1		2		1	
Trouble preparing -----	2/		1		--	
Health -----		3		2		3
Doesn't agree with me, hard to digest -----	1		2		1	
Can't eat much meat, restricted diet -----	1		1		1	
Miscellaneous -----	2/		--		1	
Availability -----		2		3		1
Stores don't carry -----	1		3		--	
Not always young -----	2/		--		1	
General -----		48		47		48
Someone in family doesn't like it -----	24		26		22	
Prefer other meats -----	11		13		10	
Past experience--any branch of service -----	5		4		6	
Dislike unspecified -----	3		2		3	
Sentimental attachment to lamb -----	3		1		5	
Don't cook much, eat out -----	2		2		2	
Past experience--got tired of it -----	1		1		2	
Eats little or no meat -----	1		2		1	
Miscellaneous -----	1		2		1	
Number of homemakers -----		273		128		145

1/ Percentages add to more than their subtotals and these add to more than 100 because some homemakers gave more than 1 reason for not using lamb.

2/ Less than 1 percent.

Table 31.--Replies to the question, "In the past year, have you shopped for lamb and been unable to find it?" and (if "YES") "How often did this happen?" Cleveland, Ohio, October 1956 survey

Replies	Homemakers who use lamb	
	Percent	
Always able to find lamb -----	-----	80
Not always able to find lamb -----	-----	20
1 time -----	2	
2 times -----	9	
3 times -----	1	
4 times -----	2	
5 or more times -----	3	
Not ascertained -----	3	
Total -----	-----	100
Number of homemakers -----	358	

Table 32.--Replies to the question, "Do you feel that a serving of lamb has more, less, or about the same food value as a serving of beef, pork, veal?" Cleveland, Ohio, October 1956 survey

Replies	Item compared with lamb		
	Beef	Pork	Veal
	Percent	Percent	Percent
LAMB USERS			
Lamb has:			
More food value -----	20	36	40
Same food value -----	40	17	29
Less food value -----	22	22	6
Don't know -----	18	25	25
Not ascertained -----	--	--	--
Total -----	100	100	100
Number of homemakers ----	358	358	358
LAMB NONUSERS			
Lamb has:			
More food value -----	11	23	16
Same food value -----	22	16	32
Less food value -----	29	23	10
Don't know -----	37	37	41
Not ascertained -----	1	1	1
Total -----	100	100	100
Number of homemakers ----	273	273	273

Table 33.--Replies to the question, "Do you feel that you know how to prepare lamb as well as you do other meats?" Cleveland, Ohio, October 1956 survey

Replies	Homemakers who use lamb			
	All users	Frequent users	Moderate users	Infrequent users
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Prepare lamb as well as other meats -----	80	86	84	72
Do not prepare lamb as well as other meat -----	19	13	15	28
Not ascertained -----	1	1	1	<u>1/</u>
Total -----	100	100	100	100
Number of homemakers <u>2/</u> ---	358	92	129	134

1/ Less than 1 percent.

2/ Frequency of use of lamb was not ascertained for 3 respondents.

Table 34.--Replies to the question, "Have you served lamb to guests in the past year?" Cleveland, Ohio, October 1956 survey

Replies	Homemakers who use lamb			
	All users	Frequent users	Moderate users	Infrequent users
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Served lamb to guests -----	34	50	41	18
Did not serve lamb to guests	60	39	54	80
Did not have guests -----	5	11	4	1
Not ascertained -----	1	--	1	1
Total -----	100	100	100	100
Number of homemakers <u>1/</u> -	358	92	129	134

1/ Frequency of use was not ascertained for 3 respondents.

Table 35.--Replies to the question, "When you shop, do you usually decide before you go to the store what meats you are going to buy?" Cleveland, Ohio, October 1956 survey

Replies	Homemakers who use lamb			
	All users	Frequent users	Moderate users	Infrequent users
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
Usually decide ahead -----	75	75	71	79
Usually do not decide ahead -	24	25	28	20
Not ascertained -----	1	--	1	1
Total -----	100	100	100	100
Number of homemakers <u>1/</u> --	358	92	129	134

1/ Frequency of use was not ascertained for 3 respondents.

Table 36.--Homemakers who purchased lamb during the week preceding the interview; October 1956, Cleveland, Ohio

Purchase of lamb	All homemakers
	<u>Percent</u>
Purchased in week preceding the interview ----	19
Did not purchase in week preceding the interview -----	81
Total -----	100
Number of homemakers -----	631

Table 37.--Homemakers who bought lamb in the week preceding the interview, by cut; October 1956, Cleveland, Ohio

Cut	Homemakers who bought lamb the preceding week
	<u>Percent 1/</u>
Chops -----	64
Leg -----	20
Breast -----	6
Flank, neck, shank -----	10
Shoulder roast -----	6
Patties -----	4
Stew meat -----	10
Number of homemakers -----	121

1/ Percentages add to more than 100 because some respondents bought more than 1 cut.

Table 38.--(Asked of those who bought selected cuts of lamb in the week preceding the interview) Replies to the question, "How much did you buy?" Cleveland, Ohio, October 1956 survey

Pounds bought in a week	Homemakers who bought lamb the preceding week			
	Leg of lamb	Chops	Other cuts	All cuts
	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>	<u>Percent</u>
1 or less -----	--	14	2	12
1+ to 2 -----	1	34	16	38
2+ to 3 -----	2	10	4	17
3+ to 4 -----	6	5	4	16
4+ to 5 -----	3	--	2	5
5+ to 6 -----	4	--	2	5
6+ to 7 -----	2	--	--	2
7+ to 8 -----	1	--	--	1
Not ascertained -----	1	1	--	2
Did not buy -----	80	36	70	--
Total -----	100	100	100	100
Number of homemakers -----	121	121	121	121
Median quantity bought in pounds --	5	2.1	2.4	2.3

Table 39.---Average display space per store for specific lamb cuts during 3 audits, 55 retail food stores, Cleveland, Ohio, 1956

Lamb cut	Before promotion Apr. 16 - May 2		During promotion August 6 - 22		After promotion Sept. 24 - Oct. 10	
	Square inches	Percent	Square inches	Percent	Square inches	Percent
Leg cuts -----	50	22.5	63	26.0	46	27.0
Loin cuts -----	20	9.0	17	7.0	9	5.3
Rack cuts -----	19	8.6	20	8.3	16	9.4
Square cut shoulder --	32	14.4	33	13.7	19	11.2
Shoulder chops -----	34	15.3	38	15.7	32	18.8
Neck slices -----	9	4.0	10	4.1	3	1.8
Breast -----	33	14.9	40	16.5	28	16.5
Shank -----	12	5.4	10	4.1	7	4.1
Stew meat -----	6	2.7	5	2.1	6	3.5
Miscellaneous -----	7	3.2	6	2.5	4	2.4
All lamb -----	222	100.0	242	100.0	170	100.0

Table 40.--Display space per store for selected meats during 3 audits, by type of store, 55 retail food stores, Cleveland, Ohio, 1956

Date of audit and type of meat <u>1/</u>	Chains		Independents <u>2/</u>	
	<u>Square inches</u>	<u>Percent</u>	<u>Square inches</u>	<u>Percent</u>
<u>Before promotion</u>				
April 16-May 2, 1956:				
Lamb -----	798	6.3	153	5.8
Beef -----	4,392	34.8	970	36.8
Pork -----	3,489	27.6	888	33.6
Veal -----	1,082	8.6	285	10.8
Poultry -----	2,283	18.0	266	10.1
Fish -----	586	4.6	77	2.9
Miscellaneous -----	8	0.1	<u>3/</u>	<u>4/</u>
All meats -----	12,638	100.0	2,639	100.0
<u>During promotion</u>				
August 6-22, 1956:				
Lamb -----	922	7.5	160	6.3
Beef -----	4,233	34.6	947	37.4
Pork -----	3,161	25.8	765	30.2
Veal -----	1,034	8.5	274	10.8
Poultry -----	2,354	19.2	308	12.2
Fish -----	540	4.4	78	3.1
Miscellaneous -----	4	<u>4/</u>	<u>3/</u>	<u>4/</u>
All meats -----	12,248	100.0	2,532	100.0
<u>After promotion</u>				
Sept. 24-Oct. 10, 1956:				
Lamb -----	654	4.9	112	4.6
Beef -----	4,435	33.6	914	37.6
Pork -----	3,728	28.2	776	32.0
Veal -----	1,125	8.5	275	11.3
Poultry -----	2,651	20.1	273	11.2
Fish -----	615	4.6	80	3.3
Miscellaneous -----	7	0.1	<u>3/</u>	<u>4/</u>
All meats -----	13,215	100.0	2,430	100.0

1/ Includes frozen meat, and excludes canned and processed meats, small seafood, and frozen dinners.

2/ Includes a small number of voluntary chains.

3/ Less than 1.0 inch.

4/ Less than .05 percent.

Table 41.--Display space for selected meats, by type of service, 55 retail food stores, average for 3 audits, Cleveland, Ohio, 1956 ^{1/}

Type of meat ^{2/}	Stores with service		Self-service stores	
	Square inches	Percent	Square inches	Percent
Lamb -----	156	5.7	1,021	6.1
Pork -----	865	31.7	4,419	26.6
Beef -----	987	36.2	5,987	36.0
Veal -----	289	10.6	1,466	8.8
Poultry -----	344	12.6	2,961	17.8
Fish -----	88	3.2	773	4.6
Miscellaneous -----	^{3/}	^{4/}	9	.1
All meats -----	2,729	100.0	16,636	100.0

^{1/} Three audits, April 16 - May 2, August 6 - 22, Sept. 24 - Oct. 10, 1956.

^{2/} Includes frozen meats and excludes canned and processed meats, small seafood, and frozen dinners.

^{3/} Less than 1.0 square inch.

^{4/} Less than 0.05 percent.

Table 42.--Most frequent, highest, and lowest prices for selected retail lamb cuts in 55 retail food stores during 3 audits, Cleveland, Ohio, 1956 ^{1/}

Retail lamb cut	Before promotion Dollars per lb.	During promotion Dollars per lb.	After promotion Dollars per lb.	Retail lamb cut	Before promotion Dollars per lb.	During promotion Dollars per lb.	After promotion Dollars per lb.
Leg -----	0.69 .85 .49	0.69 .90 .59	0.79 .89 .55	Neck slices -----	.39 .60 .15	.39 .65 .09	.49 .55 .09
Sirloin chops -----	.88 1.05 .79	.84 .84 .64	.84 1.39 .84	Blade chops -----	.64 .85 .49	.69 .99 .49	.59 .99 .59
Loin chops -----	1.44 1.49 .68	1.49 1.59 .69	1.49 1.59 .79	Breast -----	.13 .39 .05	.15 .39 .10	.15 .59 .10
Rib chops -----	.89 1.29 .49	1.29 1.39 .59	1.29 1.39 .65	Shank -----	.49 .69 .29	.49 .59 .15	.49 .69 .19
Square cut shoulder ----	.59 .85 .15	.59 .85 .35	.65 .85 .25	Stew meat -----	.39 .79 .15	.39 .89 .19	.39 .69 .15
Arm chops -----	.95 .99 .53	.69 1.09 .55	.69 1.09 .59	Ground lamb -----	.59 .79 .39	.59 .69 .48	.59 .69 .48
Shoulder chops -----	.59 .95 .49	.69 1.09 .59	.79 1.09 .59				

^{1/} The first row of figures for each cut indicates the most frequent price, the second row indicates the highest price, and the third row indicates the lowest price.

Table 43.--Most frequent, highest, and lowest prices for selected retail lamb cuts by type of store, 55 retail food stores during 3 audits, Cleveland, Ohio, 1956 ^{1/}

Retail lamb cut	Chains			Independents		
	Before promotion	During promotion	After promotion	Before promotion	During promotion	After promotion
	Dollars per lb.	Dollars per lb.	Dollars per lb.	Dollars per lb.	Dollars per lb.	Dollars per lb.
Leg -----	0.69 .79 .58	0.79 .89 .59	0.79 .89 .64	0.75 .85 .49	0.69 .90 .59	0.69 .85 .55
Loin chops -----	1.49 1.49 1.12	1.49 1.59 .79	1.49 1.59 1.05	1.05 1.09 .68	1.17 1.39 .69	.89 1.40 .79
Rib chops -----	1.19 1.29 .59	1.29 1.39 .75	1.29 1.39 .69	.89 1.20 .49	.89 1.39 .59	.92 .99 .65
Square cut shoulder --	.59 .79 .15	.59 .73 .49	.65 .75 .65	.59 .85 .37	.59 .85 .35	.69 .85 .25
Arm chops -----	.95 .99 .53	.69 1.09 .58	.79 1.09 .59	^{2/} ^{2/} ^{2/}	.69 .95 .55	.82 .95 .59
Shoulder chops -----	.59 .95 .49	.69 1.09 .69	.79 1.09 .59	.69 .92 .49	.95 .95 .59	.69 .82 .59
Blade chops -----	.64 .85 .49	.69 .99 .58	.74 .99 .59	.80 .82 .79	.69 .95 .49	.82 .82 .59
Neck slices -----	.31 .49 .15	.39 .49 .09	.49 .53 .09	.39 .60 .15	.27 .65 .15	.39 .55 .29
Breast -----	.19 .33 .09	.15 .39 .10	.15 .59 .10	.19 .39 .05	.19 .29 .10	.19 .39 .10
Shank -----	.49 .69 .38	.49 .59 .15	.49 .69 .29	.49 .65 .29	.49 .59 .25	.54 .65 .10
Stew meat -----	.39 .49 .19	.39 .89 .19	.39 .59 .29	.19 .35 .15	.25 .25 .25	.47 .59 .15
Ground lamb -----	.50 .79 .39	.59 .59 .48	.59 .69 .48	.64 .69 .59	.69 .69 .69	^{2/} ^{2/} ^{2/}

^{1/} The first row of figures for each cut indicates the most frequent price, the second row indicates the highest price, and the third row indicates the lowest price.

^{2/} No prices observed during store visit.

Table 44.--Most frequent, highest, and lowest prices for selected retail lamb cuts, by type of service, 55 retail food stores during 3 audits, Cleveland, Ohio, 1956 ^{1/}

Retail lamb cut	Service			Self-service		
	Before promotion	During promotion	After promotion	Before promotion	During promotion	After promotion
	Dollars per lb.	Dollars per lb.	Dollars per lb.	Dollars per lb.	Dollars per lb.	Dollars per lb.
Leg -----	0.69 .85 .49	0.69 .90 .59	0.79 .85 .55	0.69 .79 .58	0.79 .89 .59	0.79 .89 .64
Loin chops -----	1.05 1.29 .68	.99 1.49 .69	1.39 1.49 .79	1.44 1.49 1.12	1.49 1.59 .99	1.49 1.59 1.05
Rib chops -----	.89 1.20 .49	.89 1.39 .59	1.10 1.39 .65	1.19 1.29 .63	1.29 1.39 .75	1.29 1.39 .88
Square cut shoulder --	.59 .85 .37	.59 .85 .35	.69 .85 .25	.59 .69 .15	.59 .69 .59	.65 .75 .65
Arm shops -----	.72 .75 .69	.69 .95 .55	.69 .95 .59	.95 .99 .53	.89 1.09 .58	.80 1.09 .59
Shoulder chops -----	.59 .92 .49	.69 .95 .59	.69 .89 .59	.75 .95 .59	.79 1.09 .69	.99 1.09 .59
Blade chops -----	.59 .82 .65	.69 .95 .49	.59 .82 .59	.69 .85 .49	.89 .99 .58	.89 .99 .59
Neck slices -----	.39 .60 .15	.29 .65 .09	.49 .55 .25	.49 .49 .15	.39 .49 .09	.49 .53 .09
Breast -----	.14 .39 .05	.15 .29 .10	.15 .39 .10	.19 .33 .09	.15 .39 .10	.15 .59 .15
Shank -----	.39 .65 .29	.49 .59 .25	.49 .69 .19	.59 .69 .38	.49 .59 .15	.49 .69 .29
Stew meat -----	.19 .48 .15	.32 .59 .25	.36 .59 .15	.39 .79 .23	.39 .89 .19	.39 .69 .29
Ground lamb -----	.74 .79 .59	.59 .69 .59	.69 .69 .69	.50 .59 .39	.49 .59 .48	.59 .69 .48

^{1/} The first row of figures for each cut indicates the most frequent price, the second row indicates the highest price, and the third row indicates the lowest price.

Table 45.--Most frequent, highest, and lowest prices for selected retail lamb cuts by number of checkout counters during the pre-promotion study, Cleveland, Ohio, April 16-May 2, 1956 ^{1/}

Retail lamb cut	Number of checkout counters					
	1	2	3	4	5	6 and up
	Dollars per lb.	Dollars per lb.	Dollars per lb.	Dollars per lb.	Dollars per lb.	Dollars per lb.
Leg -----	0.74 .85 .49	0.68 .79 .59	0.69 .75 .59	0.79 .79 .58	0.69 .69 .69	0.69 .79 .63
Loin chops -----	1.05 1.10 .69	.68 1.09 .68	^{2/} ^{2/} ^{2/}	1.49 1.49 1.12	1.29 1.39 1.29	1.39 1.49 1.19
Rib chops -----	.89 1.20 .49	.94 1.19 .68	.89 .99 .79	1.29 1.29 .89	.99 1.19 .90	1.19 1.29 .63
Square cut shoulder ----	.59 .85 .38	.49 .69 .37	.59 .79 .15	^{2/} ^{2/} ^{2/}	.57 .69 .53	.62 .69 .57
Arm chops -----	^{2/} ^{2/} ^{2/}	.72 .75 .69	^{2/} ^{2/} ^{2/}	.95 .95 .53	.99 .99 .99	.95 .99 .75
Shoulder chops -----	.59 .92 .49	.59 .75 .49	.59 .79 .59	.66 .95 .62	.79 .94 .79	.75 .89 .65
Blade chops -----	.79 .79 .79	.59 .69 .59	.82 .82 .82	.69 .69 .53	.59 .69 .55	.69 .85 .49
Neck slices -----	.39 .60 .15	.17 .19 .15	.15 .29 .15	.49 .49 .29	.39 .49 .15	.29 .49 .15
Breast -----	.19 .29 .05	.09 .39 .09	.09 .29 .09	.19 .23 .15	.19 .19 .09	.19 .29 .09
Shank -----	.44 .65 .35	.49 .49 .29	.39 .49 .39	.59 .69 .38	.59 .59 .39	.49 .59 .39
Stew meat -----	.19 .35 .19	^{2/} ^{2/} ^{2/}	.15 .48 .15	.54 .54 .39	.39 .39 .39	.39 .79 .19
Ground lamb -----	.69 .69 .69	^{2/} ^{2/} ^{2/}	^{2/} ^{2/} ^{2/}	.42 .79 .42	.59 .69 .49	.54 .59 .39

^{1/} The first row of figures for each cut indicates the most frequent price, the second row indicates the highest price, and the third row indicates the lowest price.

^{2/} No prices observed during store visit.

Table 46.--Most frequent, highest, and lowest prices for selected retail lamb cuts by number of check-out counters during the promotion study, Cleveland, Ohio, August 6-22, 1956 1/

Retail lamb cut	Number of checkout counters					
	1	2	3	4	5	6 and up
	Dollars per lb.	Dollars per lb.	Dollars per lb.	Dollars per lb.	Dollars per lb.	Dollars per lb.
Leg -----	0.69 .90 .59	0.69 .79 .59	0.69 .79 .69	0.89 .89 .59	0.79 .79 .69	0.79 .89 .59
Loin chops -----	.98 1.39 .69	.99 1.49 .79	1.49 1.49 1.29	1.59 1.59 1.10	1.49 1.49 .99	1.49 1.59 .99
Rib chops -----	.89 1.39 .59	.89 1.29 .79	.92 1.29 .89	1.39 1.39 .89	.99 1.29 .89	1.29 1.39 .75
Square cut shoulder ----	.59 .85 .35	.59 .79 .45	.59 .69 .49	.59 .59 .49	.59 .69 .59	.66 .73 .59
Arm chops -----	.69 .95 .55	.69 .75 .69	.75 .82 .69	.61 1.09 .58	1.09 1.09 1.09	.92 1.09 .89
Shoulder chops -----	.95 .95 .59	.69 .79 .69	.69 .82 .69	.89 .99 .69	.99 .99 .69	.79 1.09 .79
Blade chops -----	.69 .95 .49	.69 .75 .69	.69 .82 .49	.89 .89 .58	.69 .99 .59	.89 .99 .69
Neck slices -----	.29 .65 .15	.09 .09 .09	.20 .29 .09	.39 .49 .29	.39 .39 .09	.39 .49 .09
Breast -----	.17 .29 .10	.15 .19 .15	.15 .25 .10	.10 .29 .10	.19 .29 .15	.15 .39 .10
Shank -----	.49 .59 .25	.49 .59 .49	.49 .59 .45	.50 .59 .15	.49 .53 .39	.49 .59 .49
Stew meat -----	<u>2/</u> <u>2/</u> <u>2/</u>	.59 .59 .59	.25 .25 .25	.49 .64 .25	.39 .39 .39	.39 .89 .19
Ground lamb -----	.69 .69 .69	<u>2/</u> <u>2/</u> <u>2/</u>	<u>2/</u> <u>2/</u> <u>2/</u>	.54 .59 .48	.49 .49 .49	.49 .59 .49

1/ The first row of figures for each cut indicates the most frequent price, the second row indicates the highest price, and the third row indicates the lowest price.

2/ No prices observed during store visit.

Table 47.--Most frequent, highest, and lowest prices for selected retail lamb cuts by number of checkout counters during the post-promotion periods, Cleveland, Ohio, September 24 - October 10, 1956 1/

Retail lamb cut	Number of checkout counters					
	1	2	3	4	5	6 and up
	Dollars per lb.	Dollars per lb.	Dollars per lb.	Dollars per lb.	Dollars per lb.	Dollars per lb.
Leg -----	0.69 .85 .55	0.79 .79 .79	0.79 .79 .69	0.89 .89 .64	0.79 .79 .79	0.79 .89 .69
Loin chops -----	.89 1.40 .79	1.09 1.09 1.09	1.49 1.49 1.35	1.59 1.59 1.10	1.49 1.59 1.05	1.49 1.49 1.39
Rib chops -----	.65 .99 .65	.83 .98 .69	.92 1.29 .92	1.39 1.39 .98	1.29 1.39 .88	1.29 1.39 .89
Square cut shoulder ---	.69 .85 .49	.39 .55 .25	.65 .69 .65	.69 .69 .69	.65 .65 .65	.75 .75 .65
Arm chops -----	.59 .95 .59	.79 .79 .69	.82 .89 .59	.62 1.09 .59	.94 1.09 .79	.89 .99 .79
Shoulder chops -----	.69 .79 .59	.69 .79 .59	.79 .79 .59	.89 1.09 .79	.89 1.04 .69	.89 1.09 .69
Blade chops -----	.59 .79 .59	.59 .79 .59	.82 .82 .59	.89 .89 .59	.75 .75 .59	.89 .99 .59
Neck slices -----	.44 .55 .29	.32 .35 .29	.25 .25 .25	.49 .49 .39	.29 .39 .29	.39 .53 .09
Breast -----	.19 .39 .10	.15 .25 .15	.15 .25 .10	.15 .59 .15	.19 .29 .10	.25 .29 .15
Shank -----	.54 .59 .19	.25 .49 .25	.65 .69 .65	.59 .59 .42	.49 .49 .29	.49 .69 .49
Stew meat -----	.15 .19 .15	<u>2/</u> <u>2/</u> <u>2/</u>	.47 .59 .35	.42 .69 .29	<u>2/</u> <u>2/</u> <u>2/</u>	.39 .53 .29
Ground lamb -----	<u>2/</u> <u>2/</u> <u>2/</u>	<u>2/</u> <u>2/</u> <u>2/</u>	<u>2/</u> <u>2/</u> <u>2/</u>	.48 .69 .48	.69 .69 .69	.59 .59 .49

1/ The first row of figures for each cut indicates the most frequent price, the second row indicates the highest price, and the third row indicates the lowest price.

2/ No prices observed during store visit.

